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Mercury Acquisition Complete

Analyst sees 'cause for pause'

BY ALEX HANDY

Mercury Interactive Corp. is no more. Hewlett-Packard's acquisition of the Mountain View, Calif., software company was completed on Nov. 7, and with the closure of the deal came an estimate of increased revenues from the former Mercury.

In late October, Mercury predicted its third-quarter 2006 revenues ending with September would increase by 20 percent to 22 percent from the previous year's third quarter. But the timing of the HP acquisition was such that Mercury did not have to release its full numbers. The third-quarter revenue increases included 24 deals of more than US$1 million each, said Jean Kondo, director of corporate communications at Mercury. Kondo, however, did not specify how long those multimillion dollar deals had been in the works.

Theresa Lanowitz, CEO of start-up analyst firm Voke and former analyst for Gartner, estimated that those big sales were in negotiations long before HP announced its intention to acquire Mercury in July.

"I think that a lot of that might have been deals that were tied up in the pipeline for a while," said Lanowitz. "They

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A GNU Day For Open-Source Java

BY ALEX HANDY

November was a watershed month for Java Standard Edition. The Java Community Process voted to ratify the final draft of the Java SE 6 specification midmonth, and at the same time Sun Microsystems announced it would release the Java language platform under the GPL 2.0. Meanwhile, Harmony, an independent open-source Java implementation, moved out of the Apache incubator and is headed toward a mid-2007 finish. On a less progressive note, however, two of the central architects of the Java platform left Sun in October and November.

Despite these many open-source-related announcements, it is unlikely that an open-source Java SE environment will be available by the end of this year. When Sun announced its commitment to release its implementation of Java SE under the GPL 2.0 on Nov. 13, it was ready to release only the source code for the javac compiler and the HotSpot virtual machine. The rest of Java SE 6, said Sun's Mark Reinhold, chief engineer for Java platform Standard Edition, won't be ready until next year.

"Basically, in the first half of 2007, the goal is to release a completely buildable JDK [as open source under the GPL]," said Reinhold. While the bulk of Java SE will be included in this JDK, there will be some omissions, added Reinhold. "There will still be some [intellectual property] encumbrances. We've been negotiating with many of the IP owners, and while some are working with us, others aren't willing to. We know of three [elements of Java SE] that will not be made available: the color management

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Sun wants to build the communities around Java SE, says Reinhold.

Borland Tools: No Sale

Will spin-off of IDEs into CodeGear subsidiary have legs?

BY JENNIFER DEJONG

Nine months after it put its IDE business up for sale, Borland has done an about-face.

In its third-quarter earnings call last month, the company announced that it will retain ownership of its developer tools group, reversing its earlier decision to seek a buyer. The developer tools group, which includes the company's Java, C++, C# and Delphi IDEs, will operate as a wholly owned subsidiary of Borland Software, under the name CodeGear.

REBUILT JBUILDER READY
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"After much consideration, we made the decision to establish CodeGear as a separate subsidiary," Borland president and CEO Tod Nielsen said in a statement. "We have always stated our intention to find the right buyer for this business.... After a lengthy due diligence process with several serious bidders, we feel the CodeGear decision is in the best interests of our customers, shareholders and employees," the statement said.

Asked why Borland reversed course, the company's chief marketing officer, Rick Jackson, said in a phone interview with SD Times: "Valuation and price had something to do with it. This was not a fire sale." According to Jackson, Borland had lined up five potential buyers, including "several private equity firms and a cou-

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Microsoft, Novell Sign Linux Truce

BY P.J. CONNOLLY

Although the outcry in the blogosphere over the Linux deal forged in November by Microsoft and Novell made it sound as ominous as the 1939 Nazi-Soviet Pact of non-aggression, questions remain over just how far Microsoft's new approach actually goes.

Microsoft and Novell plan to collaborate in a number of technical areas. First, document format compatibility is a big issue for end users and organizations, and Novell pledged to develop and contribute the necessary code to add support for Microsoft's Office Open XML to the OpenOffice project, and to distribute the resulting plug-in as part of its OpenOffice edition.

The companies will also work together on virtualization and associated management issues: Microsoft will develop tools for virtualized Linux, while Novell will do the same for virtualized Windows systems. They also will cooperate on managing physical servers through Web services, and simplifying the federation of Microsoft Active Directory with Novell eDirectory.

Microsoft will pay Novell US$240 million upfront for SUSE Linux Enterprise Server (SLES) maintenance and support coupons, to distribute to its customers who choose to use Linux. In addition, those customers who insist on running

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NetBeans 5.5 Running in Packs

Four add-on packs customize Sun's IDE for various uses

BY ALEX HANDY

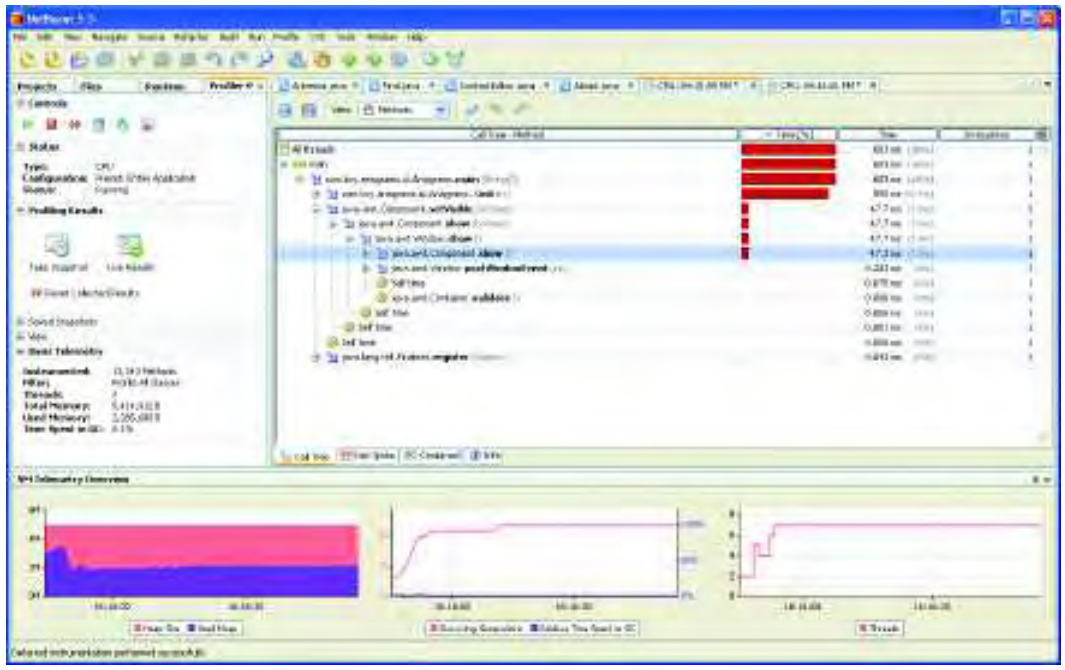
The latest version of Sun Microsystems' Java IDE, NetBeans 5.5, moves in packs.

While the standard IDE now supports Java EE 5, it's the four add-on packs that bring NetBeans new versatility and capabilities. The packs offer IDE customizations for enterprise developers, Web application designers, C and C++ coders, and mobile developers.

With Java EE 5 now in full final form, said Dan Roberts, Sun's director of developer tools marketing, Sun's developers have spent much of the past year adding in new facilities to handle EJB 3.0, the new Java persistence API and JAX-WS. He said that the source code of this new NetBeans is also available to developers seeking to modify the IDE for their needs.

Of the four developer packs offered for use with NetBeans 5.5, the enterprise pack is the most improved, Roberts said. These improvements began to take form in August, when Sun purchased SeeBeyond Software. That company's BPEL runtime engines have been added to the NetBeans enterprise pack.

Roberts said that the pack "allows you to use BPMN to define standard orchestrated process flow, then will produce for you BPEL documents that will then define how your orchestrated service will work."



The NetBeans Profiler makes a return appearance in NetBeans 5.5, though this particular feature has its own revision schedule separate from that of NetBeans.

The pack also includes new tools for viewing XML. "We've seen schema documents in many cases between 20,000 and 50,000 lines long. Just loading that into an IDE doesn't help a developer. So, we created a set of visual tools that allow you to drill into particular areas of interest," said Roberts.

Roberts said that viewing XML schema as trees can be confusing. Thus, the NetBeans team based its new views on Apple's column-style Finder windows, which were, in turn, based on the NextStep OS. As each step in the schema is selected, its children then appear in a column to the right. The children of those items are, in turn, shown in another column, when selected.

In addition, Sun has adapted NetBeans' refactoring capabilities to handle XML.

Sun has also released a new version of the NetBeans Mobility pack. This time around, the pack includes automated unit test creation, thanks to the release of a standard retinue of unit tests for the Java ME platform. These tests can be automatically inserted by the IDE where they are determined to be most useful by the developer.

Two new packs are also available for developers looking for more flexibility from NetBeans. The first is the visual Web pack, which includes drag-and-drop AJAX components from numerous third-party companies, such as Dojo, Google and Yahoo. Each of these is wrapped in JSF code to give Java developers full use of Web 2.0-style functionality in Java-based applications viewed through the Web.

The final new pack is the NetBeans C/C++ pack. Roberts predicted that this pack is best used by developers working in mixed language environments, or by mobile phone developers seeking to access core phone functionality. ■

Code-Writing as Performance Art

An old language lives on in the minds of a musical troupe

BY ALEX HANDY

Most concertgoers are used to seeing large projection screens behind the performers. Trippy or poignant visuals are a standard part of any major musical performance these days. But when Craig Latta performs his extemporaneous pieces in front of an audience, the screens behind him project source code.

These musical performances don't come from a set list, and his visual performances aren't just precooked movie clippings or looped mandalas. Latta, instead, improvises the creation of both his musical and visual presentations. His instrument is the keyboard, and his music staff is accessed via Smalltalk.

Latta is part of a widespread and loosely associated collective that calls itself Toplap (www.toplap.org), a pseudo-band whose members program musical software in front of live audiences. Latta performs solo, and the code he writes while on stage is a modified version of Xerox PARC's entirely objectified language.

Latta calls his act musical livecoding. "The act of writing code is a performance activity," said Latta. And his audiences don't have to understand Smalltalk, or its current open-source variant, Squeak, to appreciate the show, he said.

"I try to make the actual content of the programs more accessible to general audiences by making programs look like natural English, and Smalltalk is good for that because it already has that property to a large degree," said Latta. "You can look at English as a subset of Smalltalk."

Latta's background includes graduating from the University of California at Berkeley with a matching pair of majors: music and computer science. From there, he went to Atari to build systems for designing in-game audio.

SQUEAKING OUT A LIVING

The Squeak project, to which Latta is a contributor, is an open-source implementation of the programming language Smalltalk. Latta joined the project in September 1996, and now it is an integral part of his artistic expression.

The dynamism of Smalltalk is what drew musician/programmer Craig Latta to it. He can edit sounds his programs produce without interrupting them.

Latta said that he chose Smalltalk for his artistic work because of the mindset dictated by the language. "What drew me to [Smalltalk] was its dynamism," said Latta, who learned Smalltalk as his fourth overall language. "Being able to change the system while it's running without having to stop it. I'd encountered this to some degree with LISP, which was the third language I learned."

Squeak started out in 1996 when Alan Kay and Dan Ingalls, the two Xerox PARC developers who created the language, released an updated version of Smalltalk to the open-source community. With the help of fellow PARC alumnus Ted

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NEWS BRIEFS

NEW PRODUCTS

At the Software Test & Performance Conference in Boston last month, CollabNet launched **CUBiT**, a virtual build, integration and test platform that automates the configuration of servers in development, build and test environments. The Web-based system lets build and test environments be deployed across distributed teams, and provides libraries that encourage the reuse of project-based build and test assets . . . JetBrains has released **ReSharper Unit Run**, a free plug-in for Visual Studio 2005 that gives developers a fresh interface for running and profiling csUnit and Nunit tests. From a dedicated window for analyzing test results, found errors can be traced back to the source code. The company also released **dotTrace 2.0**, its profiling tool, with multiple filtering options and the ability to compare performance snapshots of the application. It's now integrated with Microsoft's Visual Studio development environment.

UPDATES

Seapine Software has tightened integrations among its test case management, change management and source code management tools. In **Surround SCM 5**, managers have tighter control over locking down changes and rollouts of new code. The new release also includes expanded support for metadata related to stored files. It is integrated with the **TestTrack Pro 7.6** change management tool, giving developers access to change lists from within **TestTrack Pro**. It also integrates with the new **TestTrack TCM** test case management tool, providing test cases to the defect management processes in one tool set . . . Serena Software has announced the availability of the latest release of its **ChangeMan ZMF** change management tool for mainframe environments. ChangeMan ZMF 5.6 offers integrated support for IBM WebSphere Developer for z/Series, and now works with the Eclipse Foundation's Application Lifecycle Framework . . . Catalyst Systems has updated its **Openmake** build management system with greater integration into other application life-cycle processes. Version 6.4.1.1 includes new adapters and workflow templates for connecting with external ALM tools; the newest adapter is for the Perforce configuration management system. Openmake also now has LDAP support, and new scanners for VisualStudio 2005 project files that capture dependencies specific to the platform . . . xBML Innovations has announced the release of updates to its **W5** desktop business modeling tools, and its **M2** corporate modeling repository. The new releases offer faster performance and usability improvements; M2 also adds remote administration capabilities . . . McCabe Software has made available its **McCabe CM 3.3** configuration management solution. New features include support for all major HP platforms, Linux on the IBM I-series, P-series and Z-series platforms, and Mac OS X . . . Xilinx has released a new kit for embedded developers that incorporates development tools, examples and hardware; the **MicroBlaze Development Kit Spartan 3E 1600E Edition** includes an SP3E1600E development board, full versions of the Platform Studio embedded tool suite and the ISE FPGA (field programmable gate array) design software, cables, a JTAG probe and a variety of preverified reference designs.

PEOPLE

FEINMAN

Jeff Feinman has joined SD Times as an assistant editor. Feinman most recently worked as a reporter with the Queens (N.Y.) Tribune. He graduated from the University of Albany in 2004 with a degree in English and journalism . . . Novell has made several appointments to its executive ranks, naming **Troy Richardson** president of Novell Americas. He had been VP and general manager of sales for Novell's Northeast region. **Susan Heystee**, the former president of Novell Americas, has been named general manager for global strategic alliances. Also, **Maarten Koster** has been named president of Novell Asia Pacific. Koster formerly was director of Tivoli Asia Pacific for IBM. ■

Making Accessibility More Accessible

U.S. government revises accessibility standards

BY ALEX HANDY

The United States Access Board has begun holding open meetings and discussions that ultimately will determine how the disabled interact with government Web sites. At the heart of these discussions is the revision of Section 508 of the Rehabilitation Act, which laid out the first set of accessibility standards for government Web and computer interfaces.

Timothy P. Creagan is a senior accessibility specialist at the U.S. Access Board, an independent federal agency overseeing the revision of Section 508, and he said that the current guidelines are somewhat muddled and dated. That's because the guidelines for information access are stretched across two laws: 1998's Telecommunications Accessibility Act and 2001's Rehabilitation Act.

The former of these bills deals primarily with telephones, fax machines and the more mundane technological items of that earlier period, said Creagan. The latter, which includes the famous Section 508 requirements, focuses on what was then a fledgling Web. The result is a set of guidelines that are now out of date, said Creagan.

To fix this, he said, the Access Board has formed an advisory committee from technology experts and representatives from government agencies that will spend the next two years holding periodic meetings in which proposed revisions to current accessibility guidelines will be discussed.

"Stuff changes," said Creagan, explaining why the revisions are necessary. "There's nothing in the standards, right now, that addresses something like an iPod. The standards talk about controls and keys on a device, but the iPods have that circular membrane that you press and turn. That could be a concern. Supposing someone has arthritis. Part of the reason we care is because a lot of agencies are now using RSS feeds to promote their agency message. If you figure someone is at their workstation with speakers and screen-readers, then RSS is accessible that way. But what if you're in the field on a cell phone, or what if you're accessing it through an iPod?"

Creagan said that the advisory committee will be covering a broad range of topics, and will also be holding open meetings that the public can attend. He encouraged software companies that seek government contracts to attend these meetings so that their voices are heard. Future meetings are scheduled on the Access Board's Web site (www.access-board.gov).

The 25-member revision board should have its initial findings ready for public comment by July 2007, said Creagan. After that, the Access Board will draft accessibility guidelines based on the committee's findings. These guidelines will also be available for public comment. Creagan anticipates the final set of standards will arrive sometime in 2008, and that they will likely be first implemented during the summer of that same year.

Until then, interested parties can track the progress of the advisory board at teitac.org. The site includes information on the upcoming public hearings, as well as the notes from the committee's past meetings. ■

Eclipse Turns 5

BY DAVID RUBINSTEIN

Talk about your rapid uptake.

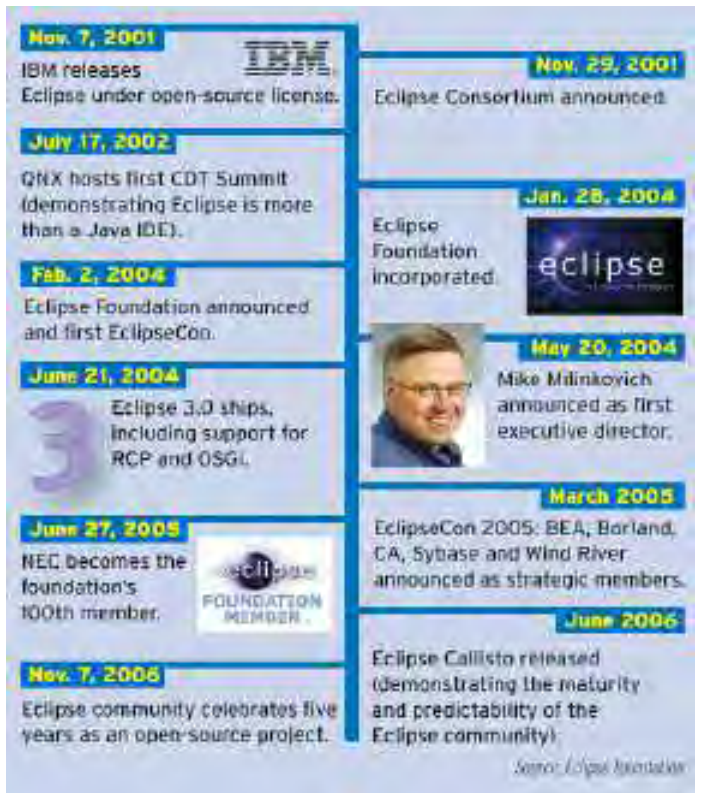
To see just how far the Eclipse platform has come in its five years of existence, one only needs to look at the numbers.

In 2001, when IBM formed the eclipse.org consortium, there were eight companies involved. Now, there are 152 members.

IBM's original contributions to the open-source community were the code to the platform and the Java Development Tools project. Today, there are 66 projects cooking at Eclipse, and some 1,300 Eclipse-based products available.

Users? Try 2.27 million, according to an IDC report issued in August.

"When we contributed the $40 million worth of code in 2001, we had a vision for this community-style software development. The Eclipse Foundation has exceeded our expectations," said Daniel Sabbah, general manager for IBM Rational Software. ■



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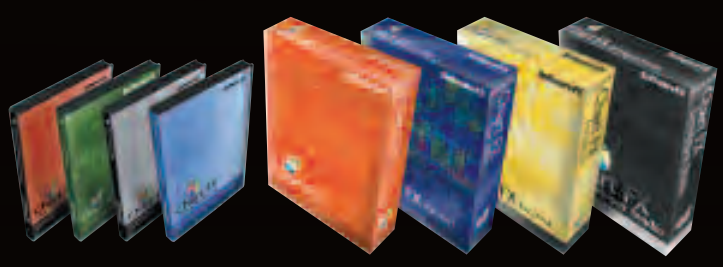

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Fabric's Workspace Gets Eclipsed

webMethods integration suite gives IT, business a common interface

BY ALEX HANDY

After a year of development, webMethods has drawn back the curtain on Fabric 7.0. This business process management and development environment now includes an Eclipse-based workspace, 193 AJAX widgets and the Cerebra metadata library. That last addition comes from webMethods' August purchase of Cerebra. webMethods also acquired Infravio in September, and has integrated support for the X-Registry and X-Broker products into Fabric 7.0.

Those Infravio products, however, will not be receiving an update in time for Fabric 7.0: The Fabric has been tailored around X-Registry and X-Broker. The now-titled webMethods Infravio X-Registry and webMethods Infravio X-Broker will remain on development schedules separate from that of Fabric itself. webMethods, though, could not predict when the Infravio tools would be updated.

The prospect of having multiple registries in the same product may, at first, seem incongruous. But Susan Ganeshan, vice president with webMethods' product development organization, said that the Cerebra library and the Infravio repository serve two very different purposes.

Ganeshan said that the Infravio registry "stores metadata about Web services in order to govern and manage those Web services. The Cerebra [library] stores info about every asset and has an inferencing engine that, through analysis of how each thing is used or called by others, can automatically determine how that structure can be visualized. One is about relationships and change management; the other is focused on Web services."

The newly added Eclipse-based design environment in Fabric gives developers and business analysts a common environment in which to develop and interconnect Web services, said Ganeshan. For developers, the environment presents a standard code view with all the Eclipse trimmings. But for those further up the ladder, and further down the coding ability scale, the workspace offers a simplified view that supports drag-and-drop service integration designs.

"We've learned there's no business process that doesn't touch business partners, systems and people in the business. We've got a complete business process suite that allows all those entities to be involved in those processes. We're focused on allowing that product life cycle to go very quickly," said Ganeshan.

Fabric 7.0 pricing, however, isn't something Ganeshan was prepared to discuss in depth. She did intimate that this business process management suite generally sells for around US$100,000 per deployment. ▮

QAVantage Reveals Life-Cycle Management Platform

Windows-based RTIME 4.0, maturing under consultants for four years, now generally available

BY ALEX HANDY

QAVantage is a newcomer to the software development world, having formed this year to offer the fruits of consultant labor to enterprise development teams. The resulting platform, RTIME 4.0, is a life-cycle management system that the company boasts handles everything from change management back to requirements gathering.

According to Daniele Chenal, vice president of marketing at QAVantage, the RTIME platform is not integrated with any specific application life-cycle tools, such as those for testing or requirements management. Instead, the company's SDLC platform is focused on managing common information used by specific SDLC tools.

But that doesn't mean this SDLC suite is handicapped, said Chenal. She explained how the system handled test management as a way to demonstrate how the platform sidesteps fine-grained tool integration.

"It allows you to define the test case and the expected results, and map those to the corresponding business requirements. Once you define a test and assign it to a tester, you can lay out the test, or link it to. If you want to map external applications to those tests, you can define the path to where those are located," said Chenal.

That keeps management and information tracking separate from the individual tools used in the life cycle, said Chenal. The company uses a client/server model to let users work with RTIME, though a browser interface is also available. "Some of the companies this is being used by have tens of thousands of requirements. To search through those rapidly, we had to offer a better interface than the Web could provide," said Chenal.

"One of the attributes that's great about the product is you can copy requirements from one project to the next. You don't have a lot of data entry repetition," said Chenal. She added that other assets, such as tests and test requirements can also be transferred from one project to another, saving time and button pushes.

While RTIME is a new commercial offering, Chenal said that the Windows-based software has been in development since 2002. Originally created by a consultant group, the platform was sold into clients' ecosystems as part of the consulting business. However, now that the application life-cycle management space has become a hot market space, QAVantage formed as a company to promote and market the platform commercially.

Chenal said that her company will be offering bulk discount pricing on the standard US$500 per user price tag of the platform. She also said the managers and other folks that may not use the system on a daily basis won't be counted as users in pricing negotiations. ▮

Watchfire Sharpens App Security Focus

BY JENNIFER DEJONG

Watchfire has built up its black-box testing tool and rounded out its security arsenal with a new reporting console.

The Waltham, Mass.-based company last month announced AppScan 7.0 and the AppScan Reporting Console.

AppScan 7.0 makes it easier for testers to determine whether an application's privilege policies are working appropriately, said Watchfire CTO Mike Weider. "Which online banking customers are allowed to review their account statements, and which ones are also permitted to pay their bills?" he said, offering an example. Previously, the only way to test privileges was to log in separately as each persona. "Now you can log in as two different types of people, and compare what one can do with what the other can do," Weider added.

Also new is automated testing for two-factor authentication, where an application requires users to enter an RSA token, for example, in addition to user name and password, he said.

Like other so-called black-box security tools, AppScan hones in on an application's flaws by simulating malicious attacks. The Reporting Console lets security teams aggregate AppScan test results from multiple applications, said Weider. It highlights flaws such as SQL injections—where a malicious query calls key data, such as credit-card numbers, from back-end databases—and also explains the nature of the problem, he said. "You have to communicate across the [entire] organization to get the right people to take action." ▮

TIBCO Gets Down To Business

BY JEFF FEINMAN

Looking to create a more accessible business process management program for business analysts and developers alike, TIBCO Software on Nov. 14 released the TIBCO iProcess Suite 10.5, and also made available Business Studio 1.2 for free.

The newest installment of the TIBCO iProcess Suite introduces Business Activity Monitoring capabilities so that customers can have a stronger grasp on business transactions and activities. It also offers greater flexibility in managing work queues, along with performance and scalability enhancements and extended database support for Oracle 10g and Microsoft SQL Server 2005. The suite leverages AJAX functionality, which TIBCO adopted in February.

The announcement of the TIBCO iProcess Suite comes in conjunction with the company's no-cost release of Business Studio 1.2, available at www.tibco.com/devnet/index.html.

"It represents a risk-free method for process analysts and developers to get this simulation and modeling environment," said Jeff Kristick, senior director of product marketing. "And then, ultimately, it provides them a seamless path to execution if they want to take a process model to an automated process at some point, and it works with the rest of our suite." ▮

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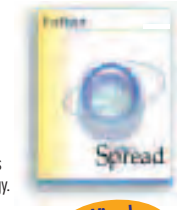
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Redefining Database Development

The Changing Face of Database Development

Approximately 60% of all applications being developed today have a database component, so why is it that most Application Lifecycle Management (ALM) solutions and methodologies pay little or no attention to this important aspect of development? Implementing tools and processes to solve database development challenges can help reduce unexpected issues with database change, increase team productivity and improve application software quality.

Microsoft Visual Studio 2005 Team Edition for Database Professionals Redefines Database Development

Microsoft Visual Studio 2005 Team Edition for Database Professionals delivers a market-shifting database development product that redefines database development. Database change can now be managed with an offline, project-centered source code control system and a suite of integrated tools within Visual Studio 2005. Schemas, DML and metadata can be versioned, unit tests can be created and executed to ensure quality, and comparisons can be made with test and production systems prior to deployment. Integration with Team Foundation Server helps increase the productivity of the database professional by enabling them to become an integral part of the application team.

Offline Database Modification

Traditional database tools require that you are always connected to the database to make modifications. When connected, you can make changes that are syntactically and semantically checked. Visual Studio Team Edition for Database Professionals provides all of the features of connected modifications without requiring you to be connected to a database. Working in an offline mode provides you the ability to make changes in isolation without worrying about impacting other users. The ability to work in isolation, coupled with the ability to auto-deploy and generate a production-like database to an isolated database instance gives you more freedom to make changes to your database in an agile fashion and provides the ability to save and version schema without restriction. It also enables richer collaboration between team members to work on database artifacts and ensures that as you make changes to the database you are not at risk of unanticipated impact on other users of the database

Take Control of Database Change

Managing change to your database schema throughout the application development process can be one of the most challenging parts of creating a database application. Ensuring that all copies of the application database are the same throughout the development team can require complex manual synchronization processes and ensuring that everyone is using the most recent version of the database can consume time and resources that could be better leveraged elsewhere.

Traditionally the "one true version" of the database data and schema was the version on the production server. This is the version that is updated in real time and any changes must be replicated back to development, test and staging systems. Not only do teams have the difficulty of synchronizing all the versions of the database when a change is made but if the change causes an application to break, rolling back that change can involve considerable effort.

Visual Studio 2005 Team Edition for Database Professionals allows the logical separation of data and schema allowing database schema to be versioned using a new Visual Studio project. Changes can be made to the schema under version control and then deployed to development, test, staging or production servers through the use of custom T-SQL deployment scripts. By keeping the database schema under version control, Visual Studio 2005 Team Edition for Database Professionals can help reduce the risk involved with schema change and allow you to track all changes that are made to the schema.

Making a database schema change can be challenging in a development or production environment. Database objects are invariably tightly coupled; making a change to the name of an object in the database can lead to the same change being needed in many other areas of the database. This has been addressed in the application space through the introduction of refactoring tools that allow you to ensure that any change is reflected in all objects that are affected. With Visual Studio Team Edition for Database Professionals, this same functionality is available to the database developer through the inclusion of rename refactoring. This refactoring functionality allows a database developer to make a change to a database object and to then see, review and apply the necessary change to all affected objects within the same database.

Automate Database Testing to Improve Software Quality

Developers have long had access to tools that allow them to create unit tests for their code. These unit tests allow them to ensure that as they make changes they are not inadvertently breaking something else or that the code they have written works as expected in a variety of scenarios. Visual Studio Team Edition for Database Professionals now brings this functionality to the database by providing a full unit testing infrastructure for your database. Unit tests can be built in T-SQL or managed code and can be built to test any aspect of the database. In addition, these database tests can be combined with the application tests to provide a more holistic view over the impact of a change.

One aspect of testing a database that is unique is the choice of test data. In order to meaningfully test a database it is important to have test data that is structured and acts in the same manner as the production data. Because of this, the ideal data to test against is the actual production data. Unfortunately, in most cases it is not possible to use production data for testing, primarily due to the sensitive nature of much of this data. While there are many workarounds for this problem such as obfuscating the sensitive data or manually creating all the test data, none are particularly good at creating a representative data set to test against. A second problem

with test data is that ensuring that every time a set of tests are run they are running against the same dataset. If the tests change the data then the next time the tests are run they will be accessing a different data set and as such are not the same tests. Visual Studio Team Edition for Database Professionals solves this problem by providing built-in data generation capabilities to allow you to create custom plans for data generation. These plans can be set up to accurately represent the shape and distribution seen in the production data using values created exclusively by the generators or can integrate portions of the production data with values created by the custom generators. A data generation plan is also repeatable; every time it is run it will create exactly the same data set.

Tests can be combined with Data Generation Plans and Schema Deployment so that whenever a test or set of test is run they can be set up to initially deploy the most recent version of the database schema, populate that schema with a full set of test data and then execute the database unit tests.

Improve Collaboration and Communication

Collaboration between developers, testers and the DBAs has long been an issue in the software industry. Visual Studio Team Edition for Database Professionals is designed to make it easier for all members of the development team to work together.

In addition to providing the ability for database developers or DBAs to easily work on and control change to the database, Visual Studio Team Edition for Database Professionals also gives the ability for other members of the team to access the database as needed. Because the schema is stored in a version control system other members of the development and test teams can easily download and deploy new versions of the schema to their local environments. Test teams can also access and integrate all of the database unit tests if Visual Studio Team Edition for Database Professionals is combined with Visual Studio 2005 Team Edition for Software Testers.

Integration with Team Foundation Server provides a basis for much tighter communication and collaboration between all members of the development team and gives the opportunity for the database experts to be involved earlier in the development lifecycle. All members of the team can assign and share work items and policies can be placed on all database code being checked into the version control system to ensure that appropriate standards are being followed.

This deeper integration of all members of the team will lead to issues being found and resolved earlier, better decisions being made and higher quality applications being produced.

Advancing ALM

Traditional ALM tools and processes have failed to address the importance of databases in most application development projects. Process is an important aspect of any form of development and with the release of Visual Studio Team Edition for Database Professionals there is a need for guidance specific to the integration of the database roles into the application lifecycle. To address this need, Microsoft has released updates to the Microsoft Solution Framework to specifically target the roles of database developer and database administrator in the application lifecycle. These updates are available as part of either the MSF for Agile Software Development or MSF for CMMI Process Improvement and provide guidance relating to how to integrate the database development and administration tasks into the overall lifecycle.

Application Lifecycle Management (ALM)

Application Lifecycle Management (ALM) is becoming more and more popular with IT organizations that are trying to apply structure to their software development process. ALM comprises tools, technologies and processes to integrate disciplines such as requirements management, project planning and management, architecture and design, application development and deployment, software quality and change management

Are You Ready to Redefine Database Development in Your Organization?

Find out more about how you can take control of database change and improve the quality of your database applications. Whether you want to completely redefine database development in your organization or just leverage the many benefits of Visual Studio Team Edition for Database Professionals for your current teams.

For more information about Visual Studio Team Edition for Database Professionals contact your local Microsoft representative or Microsoft Partner and learn more at **http://msdn.microsoft.com/vstudio/teamsystem/products/dbpro**

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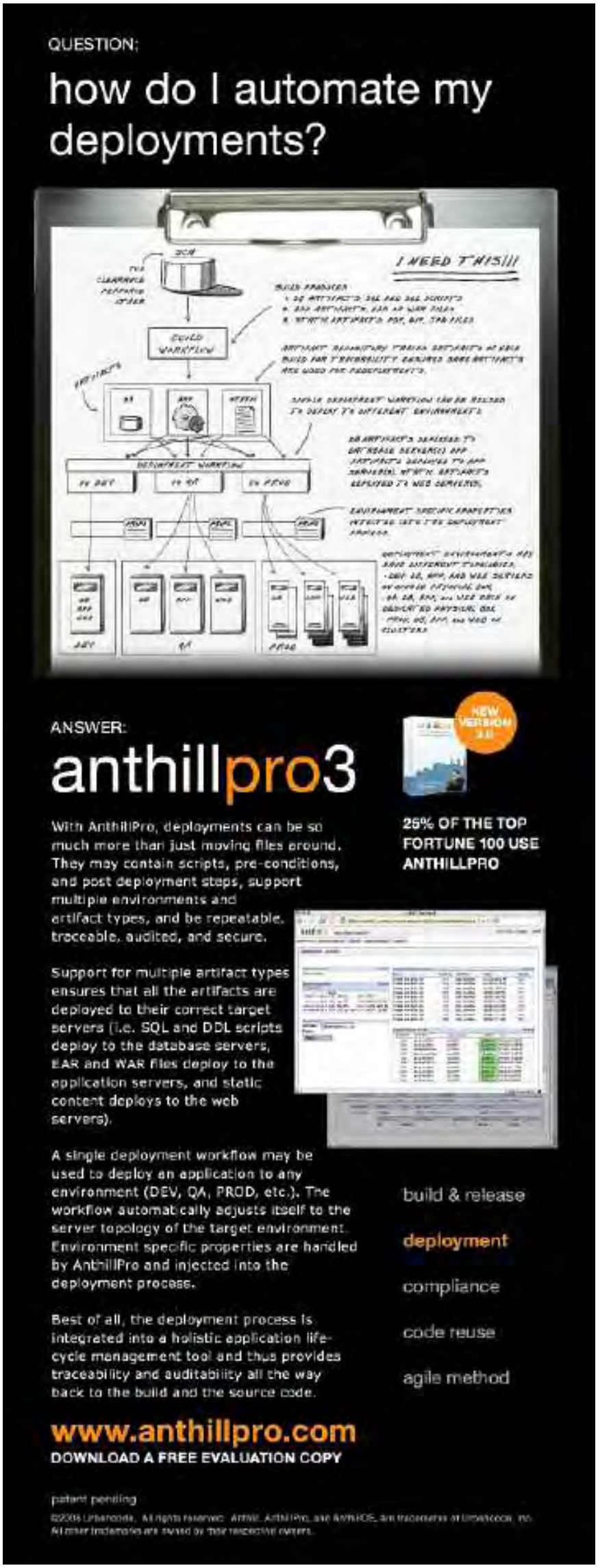

A new template for Rational Method Composer provides guidance on managing SOA projects.

RUP Composer Gives More Aid

Tool adds advice on SOA, project estimation, compliance

BY JENNIFER DEJONG

IBM has added more guidance to the tool that delivers the development practices associated with the Rational Unified Process.

The company announced last month Rational Method Composer 7.1. The updated offering includes new templates that deliver advice on governing SOA projects, estimating project duration and complying with government mandates such as Sarbanes-Oxley, said Per Kroll, IBM's development manager for RUP.

Method Composer's guidance on defining and managing service-oriented architecture efforts is essentially a set of best practices derived from IBM Global Services, the company's consulting arm. And the tool's project estimation capabilities are those of PricewaterhouseCoopers Consulting, acquired by IBM in 2002.

Rational Method Composer, which starts at US$395 per user license, follows the October delivery of its open-source cousin Eclipse Process Framework (EPF) Composer. The offerings are not identical, but they share much in common, said Kroll. "We make sure they are aligned." For instance, Method Composer provides integration with IBM Rational's software configuration management offering ClearCase, as well as other IBM Rational tools. But EPF Composer is designed to work with OpenUP, a set of best practices for development that the EPF project began publishing earlier this year. ▮

Borland Readies Rebuilt JBuilder

BY JENNIFER DEJONG

Borland Software has laid a new foundation for JBuilder, completing the transition of its Java IDE to the Eclipse framework.

The company was expected last month to announce JBuilder 2007. "This is the first release on the Eclipse platform," said George Paolini, part of the executive team at Borland. Previous versions were based on PrimeTime, the company's own underlying framework, but JBuilder 2007 has been rearchitected to take advantage of the open-source framework, he said.

The updated offering includes TeamInsight, which lets managers set up the Java IDE to also support the open-source tools their teams rely on. For instance, a manager could configure JBuilder to work with Subversion (for version control) Continuum (for continuous builds) and Bugzilla (for defect tracking), said Michael Swindell, Borland's senior director of product management for the developer tools group. "When you start a new project in JBuilder, that project is automatically checked in to source control, build control, bug control," he said.

Also new to JBuilder 2007 is the ability to create visual models of Enterprise JavaBeans, using a feature that is based on the company's Unified Modeling Language offering, Together. The visual models of the EBJs automatically generate source code, and they also allow developers to "switch back and forth between the model and the code," keeping the two synchronized, Swindell said. Earlier JBuilder versions offered the same capabilities for Web services, he said.

JBuilder is a key offering in CodeGear, Borland's new developer tools subsidiary, which also includes its C++, C# and Delphi IDEs.▮

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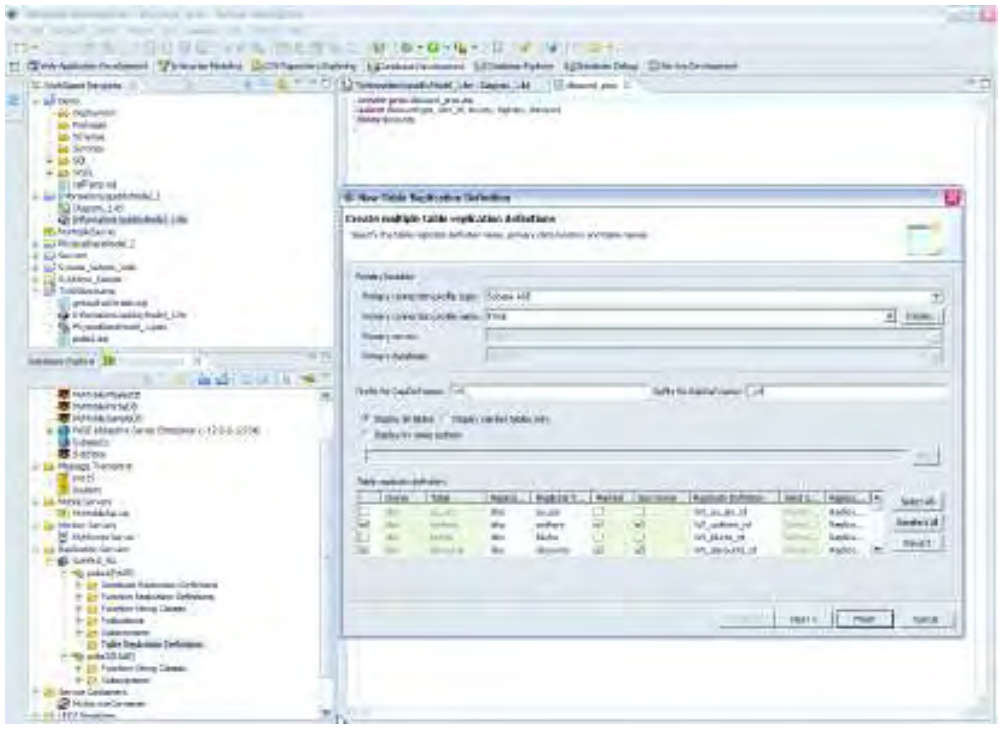
Sybase Releases Data Integration Suite

BY P.J. CONNOLLY

Sybase announced last month the general availability of its Data Integration Suite 1.0, which supports multiple applications, databases and legacy systems with the aim of providing access to data without concern for its format or location.

The new suite was designed to meet the needs of modern applications, including business intelligence, CRM and regulatory compliance, as well as the current SOA fetish. As Sybase vice president of information technology solutions Kathleen Schaub explained, "The idea behind the suite is to give customers a smarter, more streamlined way to put this diverse data together."



Data replication is one of the many tasks handled by the Sybase Data Integration Suite; Sybase WorkSpace exposes the tools to users.

For now, the suite consists of four core components covering federation, real-time event processing, replication and search, and includes developer and management tools. Other functions such as ETL (extract, transform and load) and modeling are performed by companion apps. Many of these tools are built on technology that Sybase acquired through purchases of companies such as Avaki and ISDD.

Sybase Data Federation allows standardized access to data from a variety of distributed sources, and enables the efficient, flexible and scalable consumption of data by enterprise applications that require the collection of data from scattered parts of an organization.

Sybase Real Time Events eliminates the delays inherent in batch updating and polling processes, by pushing events from operational datastores to messaging systems such as IBM's WebSphere MQ. This doesn't simply make "just-in-time" reaction to changes possible, but adds a solid background of data for the decision.

Sybase Replication works with applications to ensure real-time access to the most up-to-date data across the business, while Sybase Search enables the use of structured and unstructured data in apps, allowing the analysis and query of both fixed and mobile sources. The suite also includes the Eclipse-based Sybase WorkSpace IDE and administration services.

The components of the Data Integration Suite are also available separately. The ETL technology Sybase acquired through the purchase of Solonde is not currently part of the suite, although it will be integrated into future versions. Also outside of the suite is Sybase's Power Designer modeling and metadata management product, which works with the suite to establish an end-to-end scheme for service-oriented system design.

Schaub noted in an earlier interview that "people going into SOA need to think about data in a whole different way." Applications and data have traditionally had something close to a one-to-one relationship, she pointed out. Today, the requirements are broader, Schaub argued, and the tools in the Sybase Data Integration Suite let customers build more sophisticated apps than were possible before. ■

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AgitarOne: Unit Tests For Old Code

BY ALEX HANDY

By now, every good developer knows that unit testing is of primary importance to the development process. However, Jerry Rudisin, CEO and president of Agitar Software, said that there's one area of development that is perpetually left out of the unit testing tumult: inherited code.

"One of the things that got in the way of people [trying to do unit testing] has been the fact that they had this really nasty mass of legacy code written in Java that they knew they wanted to start modifying and enhancing, but they didn't want to touch it because they had no unit tests for it," said Rudisin.

To address the situation, Agitar in mid-November released AgitarOne, a new product that includes all of Agitar's previous software offerings mixed together with server-side JUnit test generation.

"Unleash AgitarOne on your legacy code, and it will go through and generate a good set of JUnit tests," Rudisin said. "They're not as good as hand-generated JUnit tests on original code, but they serve as a really useful set of regression tests."

AgitarOne includes all of Agitator 3.0's standard features: a dashboard for viewing code coverage, support for exploratory testing and code standards enforcement. But AgitarOne's server-side approach to the testing process brings some new abilities to the mix. For starters, AgitarOne automatically installs the open-source tool Ant to give developers the ability to do continuous integration testing.

But the real reason for running AgitarOne on the server and not on the desktop, said Rudisin, is that the product's automated test generation is very CPU-intensive. Thus, off-loading automated JUnit test generation onto the server frees up desktops to deal with standard daily tasks. Rudisin added that AgitarOne is capable of utilizing multiple CPUs and servers for its computations.

A standard installation of AgitarOne costs around US$50,000, said Rudisin. The server-side tool is accessed through Eclipse plug-ins, which are included in the product. Developers simply install the AgitarOne plug-in, and are then able to add unit tests through the Eclipse project view. Tests can be generated on a small scale—testing a single class—or a large scale—testing an entire project. All of these tests are generated from scratch as needed.

And while the tests generated by AgitarOne will never be better than hand-coded unit tests written at the same time tested code is completed, the tool automatically generates its tests based on the user's desired code coverage requirements. That, said Rudisin, means code with absolutely no unit tests can be 70 percent covered from top to bottom with only a few mouse clicks and some dedicated server-side CPU time. ▮

CodeSmith Updates Templates

BY ALEX HANDY

It's just easier to code when the busywork is handled by software instead of wetware. That's the philosophy behind CodeSmith 4.0, a code template creation and maintenance utility from the company of the same name. New to version 4.0 is an open-source .NET template library and simplified template management tools.

Rob Howard, a partner at CodeSmith Tools, said that previous versions of CodeSmith offered numerous disparate ways to manage template files generated in the program. In the most recent version, however, CodeSmith offers a more cohesive interface for these files. Howard said that templates can now be handled within Windows Explorer, and thanks to new functionality from CodeSmith, source code files can be sent to build from a right-click drop-down menu.

Howard said that CodeSmith's template creation and management tools can be used with any language, but the tools really shine with Visual Studio 2005.

CodeSmith 4.0 Professional edition costs US$399 and includes the CodeSmith template IDE and Visual Studio 2005 integrations. The standard edition does not include these features and costs $99.

"In 4.0 we're shipping an open-source template library called .NET tiers. The team that built it basically took Microsoft's recommended patterns and practices for software development, and also took Microsoft's enterprise libraries and built a set of templates around them," said Howard.

CodeSmith 4.0 also includes an extension of the Visual Studio 2005 snippets feature. Howard called the feature "active snippets," and said that it was designed to make snippets more malleable.

"The snippets themselves are configured through CodeSmith," said Howard. "It automatically registers these into Visual Studio 2005. You have a folder in CodeSmith that you drop these into and specify properties associated with them." Those snippets can then be configured through a dialog box that appears when the specific snippet is triggered. This, said Howard, gives developers the opportunity to configure their snippets for specific uses on the fly. ▮

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Adobe Gives Scripting Engine to Mozilla

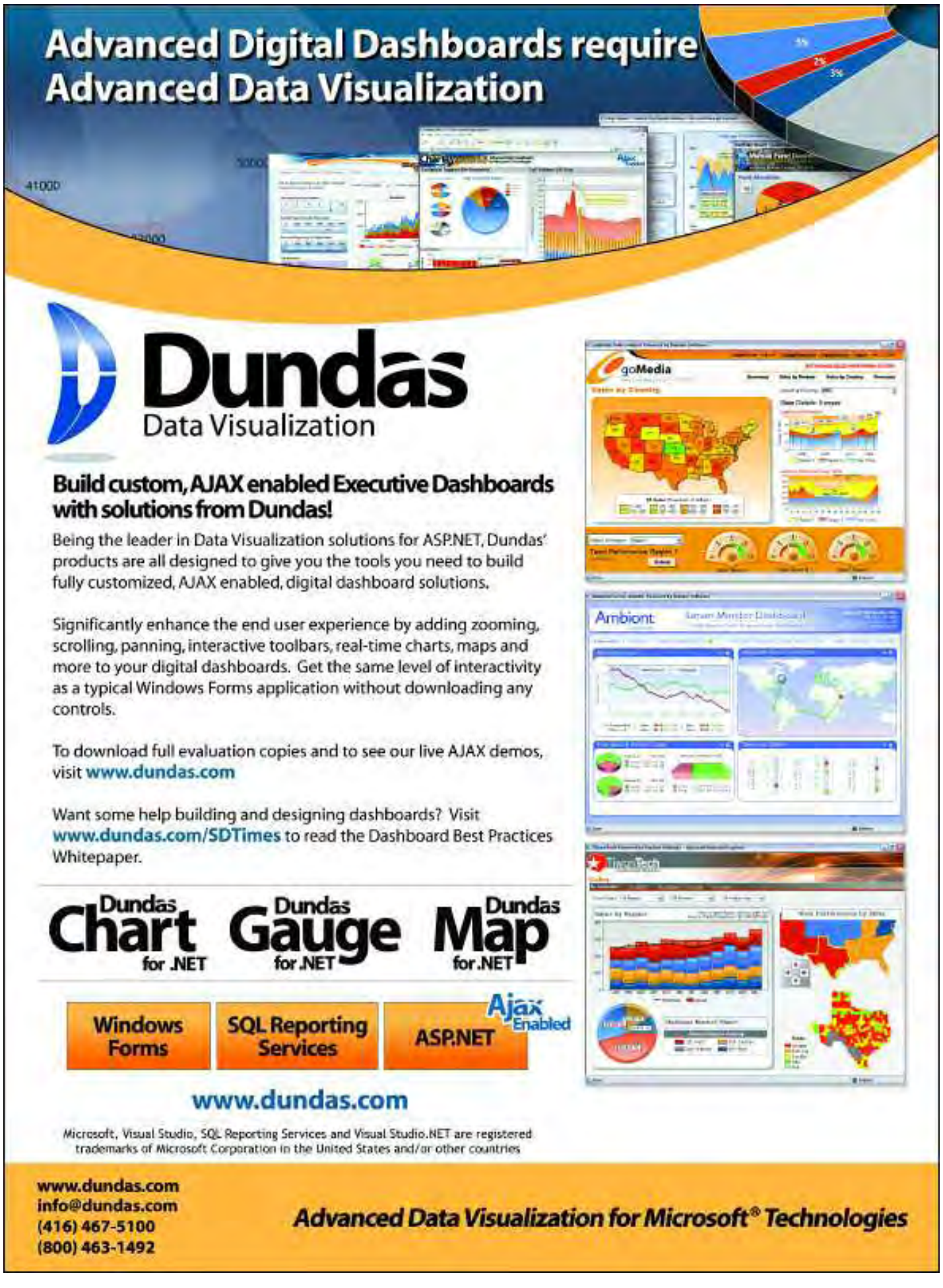
BY DAVID RUBINSTEIN

In the largest contribution to the Mozilla Foundation since its inception in July 2003, Adobe Systems in mid-November announced it has given over the source code for its ActionScript Virtual Machine and its Just in Time compiler to the not-for-profit organization.

Mozilla will host an open-source project, called Tamarin, that will build out a common scripting engine based on the ECMAScript Edition 4 standard that underlies Adobe's Flash Player. Mozilla will use that engine in the next generation of its SpiderMonkey JavaScript engine inside Firefox, and Adobe will use it in future versions of the Flash Player.

Pam Deziel, director of product marketing for the Adobe platform, said Adobe will commit an unspecified number of engineers to the Tamarin project. "We have developers [champing] at the bit to participate in open source," she said. She said a message that sometimes gets lost in the noise around AJAX, rich Internet applications and browser updates is that the Flash Player is based on an open standard. "We thought the Mozilla Foundation was the most effective way for Adobe to participate in open source. This will create a common virtual machine between Firefox and Flash."

There was no timeline for when the project will be ready to roll back into Flash or Firefox. ▮



Object Database Leaps Forward

BY P.J. CONNOLLY

Although relational databases are ubiquitous, there are cases where the preferred data store is an object database, one accessed by navigating the data, rather than the declarative interface used in relational databases. Applications for object databases range from high-end engineering, scientific and telecommunications applications, down to embedded devices and real-time systems.

Object database supplier db4objects is chasing after the latter side of the market with the latest release of its db4o platform.

The company pitches db4o as ideal for embedding within an application or on a device, or in any situation lacking a database administrator. Efficiency and performance are showcased in version 6.0 of db4o; the company claims that the new release is 10 times faster than version 5, while occupying one-tenth of the memory.

Responding to user demand, db4objects cleaned up the .NET API in db4o 6.0, reducing the number of "Java-isms," according to company founder and CEO Christof Wittig. The company also added so-called "server-side cursor" technology, allowing deterministic response times when querying in multi-user client/server situations.

Version 6 of db4o includes an improved replication system for interfacing with relational databases via Hibernate. Deleted object replication and improved compatibility with MySQL, Oracle and PostgreSQL are in the new release. ▮

Fancy Dancing for Web Services With Fotango

Web-based JavaScript app dev platform releases open-source .NET libraries for Microsoft, Mono

BY P.J. CONNOLLY

Rolling out a Web application is only partly about the code. Server setup and network security can present issues before the first user will access the application, while maintenance chores such as backups also require the consideration of, and sometimes negotiation between, developer team and operations staff.

U.K. software and systems developer Fotango has created Zimki, a pay-as-you-go, JavaScript-based Web app development platform, as an answer to that problem, and recently released open-source .NET client libraries for it. The new libraries were released under the GNU Lesser GPL, and work with both Microsoft's .NET Framework and the open-source Mono implementation of .NET.

The company claims that Zimki makes it simple for developers to expose their code as a Web service; with the new libraries, they can automatically persist JavaScript objects without writing any SQL statements. Fotango CIO James Duncan compared Zimki to an evolved version of utility computing schemes such as Amazon's Elastic Computing Cloud. "We sit further up the stack; we're providing, effectively, an application server, a database, that sort of thing."

Zimki's core is a server-side JavaScript engine based on the Mozilla SpiderMonkey project. The development environment consists of a WebDAV service, code libraries including the new .NET code, and tools for code and data replication.

KEYS TO THE 'REALM'

The essential paradigm is the Zimki "realm." Each realm contains all the data, source code and user information for an app, with at least one so-called "API key" that tracks how the software is used. Behind the scenes, an object store maps out to the metaphors used by JavaScript objects, storing what Fotango calls data dictionaries in key/value pairs. The Zimki developer portal includes an object browser for rough views of the object store.

XML services are a big part of the Zimki story. The client-side libraries implement AJAX technology to make the user experience richer, while using bandwidth more efficiently than a traditional browser-based app. Developers can assemble desktop apps simply by requesting the service and processing the XML output. "Normally when you write an AJAX-enabled application, you're writing the client side in JavaScript, and it's making requests to your back end," Duncan said. "What we're saying is, you can write your back-end application in JavaScript as well."

Zimki doesn't require minimum, set-up or other upfront costs; billing is based primarily on a "per API call" basis. One can arrange for account billing, or use software "tokens" for a pay-upon-use scenario. ■

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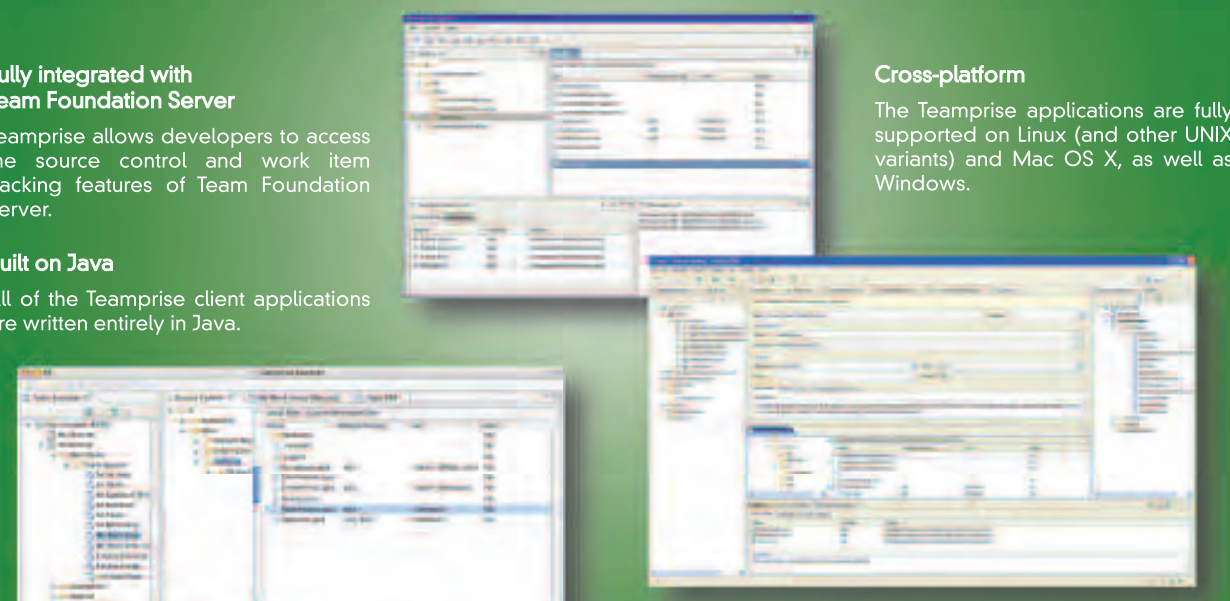

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Mercury Tops Tester's Choice Awards Again

BY DAVID RUBINSTEIN

BOSTON—For the second year in a row, a Mercury product has taken the grand prize in Software Test & Performance magazine's Tester's Choice Awards, presented at the Software Test & Performance Conference here in early November.

Mercury's QuickTest Professional was cited by a preponderance of subscribers to the magazine, which is published by BZ Media, publisher of SD Times. Last year, Mercury's TestDirector for Quality Center took the highest honor. Now, Mercury is a part of Hewlett-Packard, which closed on its acquisition in early November.

"Enhanced team collaboration capabilities...surely played a role in thrusting Mercury's QuickTest Professional to the top of the stack this year," wrote the editors in the December issue, which highlights the awards.

In all, Mercury products were named winners in nine categories. Compuware and Pragmatic were next with wins in two categories each. The popular JUnit also took top honors in two categories. ■

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IBM Rational Purify/Plus	**WINNER**
Eclipse Test & Performance Tools Platform	RUNNER-UP
Parasoft Jtest	RUNNER-UP

Test/QA Management

Mercury TestDirector for Quality Center	**WINNER**
Borland SilkCentral Test Manager	RUNNER-UP
Compuware QADirector	RUNNER-UP

Load/Performance Test Solution

Mercury LoadRunner	**WINNER**
Microsoft Visual Studio Team Edition for Software Testers	RUNNER-UP
IBM Rational Performance Test	RUNNER-UP

SOA/Web Services Test Solution

Compuware DevPartner Studio	**WINNER**
Parasoft SOAtest	RUNNER-UP
Empirix e-Test Suite	RUNNER-UP

Security Test Solution

Compuware DevPartner Security Checker	**WINNER**
Beyond Security beSTORM	RUNNER-UP
Watchfire AppScan	RUNNER-UP

Test Automation Solution

Mercury QuickTest Professional	**WINNER**
Mercury WinRunner	RUNNER-UP
Borland SilkCentral Test Manager	RUNNER-UP

Defect/Issue Management

Mercury TestDirector for Quality Center	**WINNER**
Microsoft Visual Studio Team Edition for Software Testers	RUNNER-UP
Mozilla Organization's Bugzilla	RUNNER-UP

Embedded/Mobile Test & Performance

Mercury QuickTest Professional	**WINNER**
IBM Rational TestRealTime	RUNNER-UP
Coverity	RUNNER-UP

SCM/Build Management Solution

Apache Ant	**WINNER**
IBM Rational BuildForge	RUNNER-UP
Catalyst Openmake	RUNNER-UP

.NET Test & Performance Solution

Microsoft Visual Studio Team Edition for Software Testers	**WINNER**
Mercury LoadRunner	RUNNER-UP
NUnit	RUNNER-UP

Java Test & Performance Solution

JUnit	**WINNER**
Mercury LoadRunner	RUNNER-UP
Eclipse Test & Performance Tools Platform	RUNNER-UP

Integrated Test Suite

Mercury QualityCenter	**WINNER**
Microsoft Visual Studio Team Edition for Software Testers	RUNNER-UP
Compuware QACenter Enterprise Edition	RUNNER-UP

Commercial ALM Solution Under $500/Seat

Pragmatic Software Planner	**WINNER**
Rally Software's Rally	RUNNER-UP
VersionOne V1 Agile Enterprise	RUNNER-UP

Commercial Test/QA Solution Under $500

Pragmatic Defect Tracker	**WINNER**
Intel Vtune Performance Analyzer	RUNNER-UP
TRAQ QATrac Professional	RUNNER-UP

Free Test/QA Solution

JUnit	**WINNER**
Eclipse Test & Performance Tools Platform	RUNNER-UP
Mozilla Organization's Bugzilla	RUNNER-UP

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Eclipse Test & Performance Tools Platform	**WINNER**
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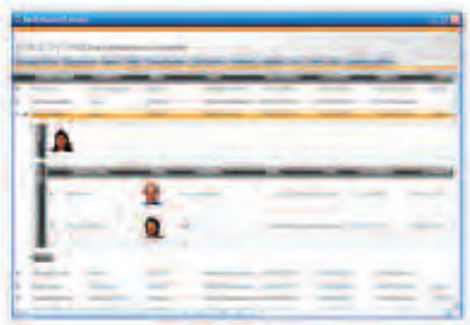

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_INFRASTRUCTURE LOG

_DAY 15: This project's out of control. The development team's trying to write apps supporting a service oriented architecture, but it's taking forever. Gil's resorted to giving them all coffee IVs. Now they're on java while using JAVA. Oh, the irony.

_DAY 16: Big crisis—we've just run out of half-and-half!!

_DAY 18: I've found a better way: IBM Rational. It's a modular software development platform based on Eclipse that helps the team model, assemble, deploy and manage service oriented architecture projects. The whole process is simpler and faster, and all our apps are flexible and reusable. The software we write today will be the software we use tomorrow. :)

_The team says it's nice to taste coffee again, but actually drinking it is sooo inefficient!

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Code-Writing as Performance Art

◂ continued from page 3

Kaehler, Squeak has become an environment that can translate Smalltalk programs into C, allowing the language to live on any operating system.

And it's Squeak that allows Latta to create extemporaneous computer programs that then create ambient and noiselike soundscapes. Thanks to the dynamism of Smalltalk, Latta can edit the sounds his programs produce without interrupting them. The one thing that can't happen during a show, said Latta, is for the music to stop. With Smalltalk, a modification to the code produces instant results, and the music will stop only if Latta makes a mistake.

So, why code in front of a live audience, where a bug will result in dropped beats rather than compiler errors? "Dynamic programming and music improvisation have been two of my big passions ever since I first learned about computers when I was 8 or so," said Latta. "I think this would be a great way to bring programming to the masses in an interesting way." ▮

SMALLTALK, A HISTORY

As with many modern computer innovations, Smalltalk's origins are at the Xerox Palo Alto Research Center (PARC). Alan Kay and Dan Ingalls' Smalltalk influenced a whole generation of other programming languages.

The first time Smalltalk appeared on a PARC computer is alleged to have been spurred by a bet. After seeing Simula—the programming language created by Ole-Johan Dahl and Kristen Nygaard in Norway during the 1960s—the PARC team took on the many ideas originated therein. Kay and Ingalls were entranced by the idea of message passing—sending stateless info to outside processes—and, according to the legend, they bet they could create a message passing programming language in "a page of code."

By 1971, Smalltalk-71 had surfaced. It was a crude initial example of what the language would later become.

By 1976, the whole PARC team was contributing to the language, adding inheritance and solidifying the syntax to more closely resemble Smalltalk's ultimate form. That form would evolve alongside the graphical user interface of the Alto computer, and Smalltalk applications would eventually come to be programmed within a graphical development environment, one of the first of its kind.

That form came to be in 1980, when Smalltalk-80 was released. This edition was quietly passed around Silicon Valley, to such computer companies as Apple and DEC. Apple's own computers would later become another spawning bed for Smalltalk, as the Apple II variant became popular in the mid- to late 1980s.

—Alex Handy

HP's Acquisition Of Mercury Final

◂ continued from page 1

talk about the amount of deals over one million, and usually when you see deals like that, they've been in the pipeline."

Lanowitz said that the customers she speaks to are calling the acquisition a "cause for pause." They are not worried about the power or quality of Mercury's testing tools, she said. "People are not dissatisfied with the products and the tools. The products and the tools work very well. What those companies are worried about is that HP's not a software company."

That sentiment was echoed by Melissa Diane Ramer, director of analysis and quality assurance for Transplace, a logistics firm that has recently re-upped its Mercury contracts.

"We're hoping they keep the Mercury culture alive. A lot of the knowledge sharing that goes on in the Mercury forums and online is very strong," said Ramer, expressing Transplace's views regarding the acquisition. "We're hoping that continues to stay alive and be something HP fosters instead of taking away from."

While Ramer said that Mercury representatives were upfront about the acquisition, she added that the company did not offer any information about future integrations, additions or sales bundles. "I haven't heard anything about that, and I would be interested to see in the long run how that turns out," said Ramer.

"We don't know what the branding strategy is; we don't know what the road maps are; we don't know if HP is going to completely integrate [Mercury's] products into the HP product line," said Lanowitz.

Kondo promised that HP would release the specifics of its plans for Mercury at the HP Software Universe event taking place in Vienna, Austria, this December. ▮

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Sun to Open-Source Java Under GPL; Harmony Nears

◄ continued from page 1

library, the font rasterizer and the graphics rasterizer. Our plan when we release the fully buildable JDK is that we will release binaries of those modules."

While Reinhold and his team work toward making Java SE available in early 2007, the Java ME team released its implementation of that Java to the open-source community on Nov. 13. The code was made available under the GPL 2.0.

But Sun does not have a monopoly on open-source Java. Motorola is working on its own Apache-licensed version of Java Micro Edition (see related story, page 34), and the Harmony project is nearing finalization. Geir Magnusson Jr., Harmony project lead and director of middleware architecture and open-source technology for Intel's middleware division, said the open-source implementation of the Java class libraries and runtime environments should be complete by mid-2007.

Magnusson said that, had Sun agreed to release Java SE under a license that would have allowed proprietary code modification, he and the Harmony team could have ceased their work. "If Sun had let their implementation out under CDDL, or MIT or some license that allows proprietary innovation, I could go back to doing my job instead of working on Harmony all the time," said Magnusson. "If your business objective is to be open-source but still maintain and control the code, and have that walled garden, then the GPL is the best choice."

Copyrights associated with code written for Harmony aren't shared with any large corporation, only with the project itself, said Magnusson. Sun, on the other hand, currently requires all contributing open-source developers to sign agreements that share copyrights with Sun. Sun will continue this model with open-source Java, and Magnusson wondered if companies like IBM and BEA Systems would be willing to share their copyrights with Sun.

Magnusson also said that the Java engineers at Sun might have a tough time adjusting to the open-source development model.

"In some sense, you do have to let go and let other people have a voice. They very tightly control Java now. That means they don't fix a bug because, for example, they're afraid of breaking existing applications that are accidentally dependent upon that bug. It's legendary, some of the fights that happen inside Sun over bug fixes," said Magnusson.

Sun's Reinhold, however, said that courting external committers for Java SE is a top priority. "At Sun, we're not treating this as a 'throw the code over the wall' exercise," he said. "We want to build the communities around this."

Sun's open-source offering will feature Java SE 6. Harmony, on the other hand, will be strictly a Java SE 5 implementation. Magnusson did state that version 6 could be integrated into the Harmony codebase by the end of 2007, but he added that no work has yet been done on this avenue of development.

'GOOD LUCK...YOU'LL NEED IT'

Meanwhile, the Sun Java team lost two key members. Graham Hamilton, vice president and fellow, Java platform architecture, left Sun in November. Hamilton's duties will be taken over by James Gosling, one of the original architects of Java who will now oversee the direction of the language and its ecosystem as a whole. Also, Gilad Bracha, distinguished engineer and computational researcher, left in mid-October. In his final official blog posting at Sun, he signed off by writing to the Java community: "Good luck to you all—you'll need it." ▮

COMING IN DECEMBER... JAVA SE 6

Java SE 6 is slated for release this December, and will add many of the features already offered by Java EE 5. These include support for annotations, the inclusion of JAX-WS for Web services development, and the ability to address Java class files from external scripting languages.

In addition, the graphical elements of Java SE 6 have been overhauled to facilitate GUI elements more in tune with the native operating system on which a Java application runs. That means brushed aluminum window trim under Mac OS X and blue and green title bars under Windows XP.

Another, less obvious change in Java SE 6 involves the daylight savings time change scheduled to begin in 2007. With extra days being added to daylight savings time, Java applications written in previous iterations of the language won't be prepared for the shift. Java SE 6 is aware of the change, however, and applications dealing with time and dates will already be prepared.

The new Java will also include expanded diagnosis and troubleshooting tools. Among these are an updated JConsole, which can detect and diagnose issues in the JVM as a program is run. Also included is the newest iteration of the Java DB, an all-Java database based on the Apache Derby project. *—Alex Handy*

Vinton G. Cerf
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Amy Wu
Computer Science Student
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Microsoft, Novell Sign Linux Truce

◄ continued from page 1

Linux instead of Windows will be encouraged to run SLES. Microsoft agreed to dedicate $94 million during the five-year term of the agreement to joint marketing efforts.

Much fuss surrounded the intellectual property side of the agreement. For starters, each company will write the other an upfront check in exchange for a release from liability for using each other's patented technology. Because Microsoft's volume far exceeds Novell's, a net payment of $108 million will go from Microsoft to Novell, but Novell will be returning royalty payments of about $40 million over the five-year term, based on a percentage of revenue from its open-source products.

As part of the deal, Microsoft has promised not to assert its patent rights against individual and noncompensated developers—in short, hobbyists. Unfortunately, this leaves many people and projects in limbo, because a good deal of Linux development is driven by coders working for, or sponsored by, commercial operations.

The Samba Team went on record Nov. 12 as opposing the terms of the deal, calling it "divisive" and "not acceptable." Meanwhile, Software Freedom Law Center CTO Bradley Kuhn observed that "Microsoft's giving away ice in the winter time. There's nothing there that they're actually granting anybody."

Kuhn explained that the GPL was designed to ensure that commercial and noncommercial activities were treated equally. "What the [Microsoft] promise does, is it segregates noncommercial and commercial activity," he said. "That's something we won't put up with," he later added.

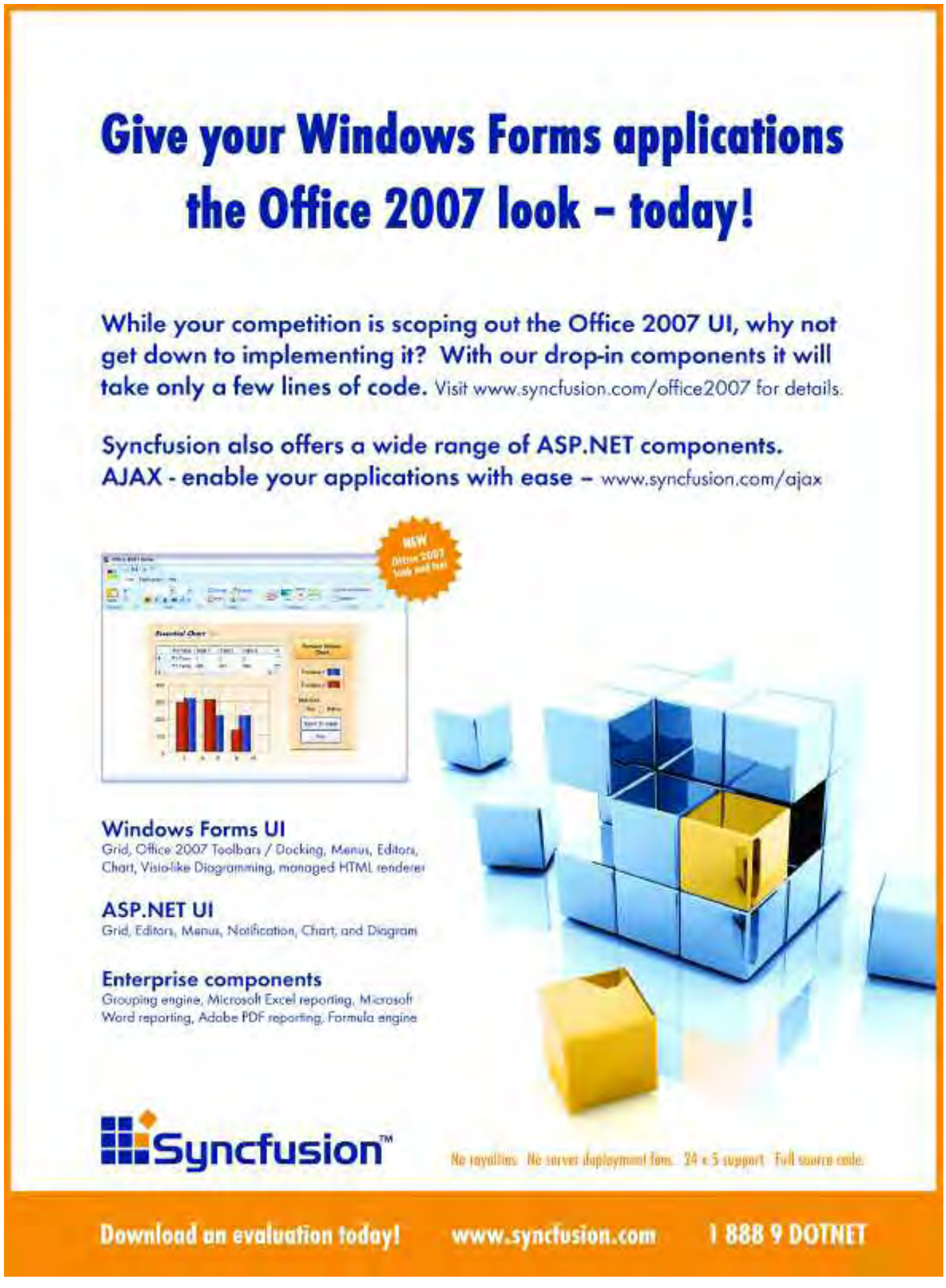
He argued that "the constant interaction between the noncommercial and the commercial developer, who in fact are sometimes the same person…is what keeps the community vibrant and flowing, and that's a somewhat foreign concept for a proprietary software company like Microsoft." Kuhn further called the deal "worse than useless." ▮

SaaS for ISVs

BY P.J. CONNOLLY

Software as a service has become an increasingly popular concept, due in no small part to the success of the Salesforce CRM offering. But the resources and tools required to adopt a services-based business model can discourage smaller independent software vendors and start-ups from taking the plunge.

Enter Microsoft, and its SaaS On-Ramp Program, with discounted Windows Server Standard Edition and SQL Server licenses, and other incentives. Program participants will receive a Windows license for up to eight server CPUs and a two-CPU SQL Server license, and will be covered by the company's services provider licensing agreement. This allows ISVs to license Microsoft products on a monthly basis to offer hosted applications and services to their external customers, including the ability to grant customer demos for up to 60 days, and 20 licenses for datacenter administrators free of monetary cost. ▮



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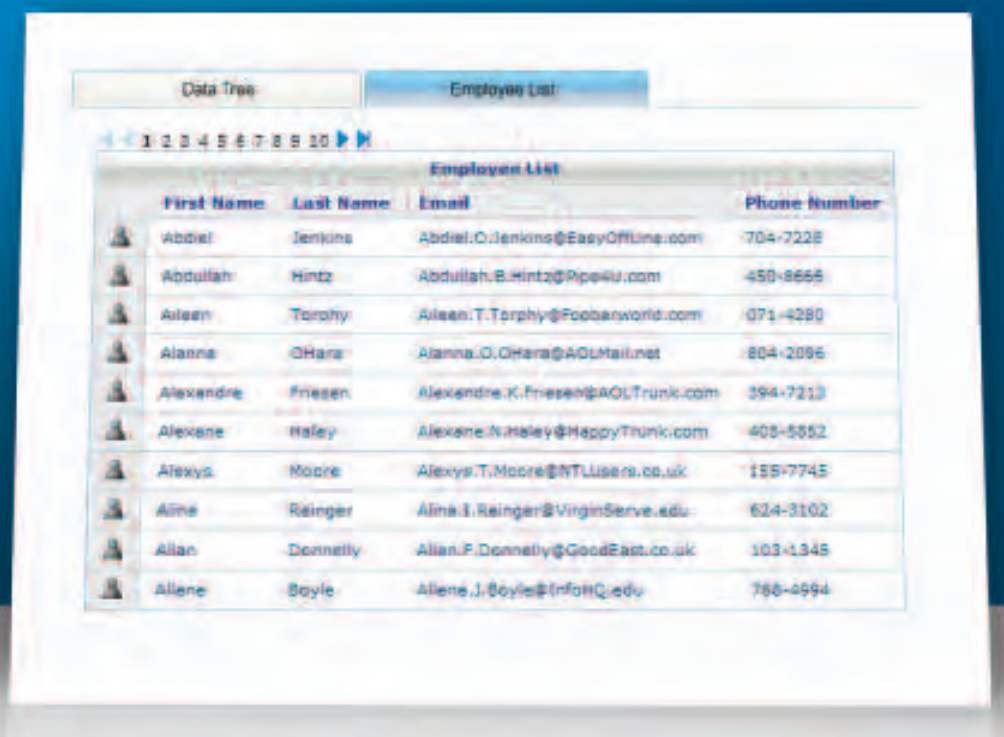

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Borland Spins Out Tools as CodeGear

◄ continued from page 1

ple of strategic companies." He declined to offer details about the interested parties but said it was difficult to establish an appropriate value for the tools business. "The financials of Borland's ALM business were so intertwined with those of [the developer tools group] that operational expenses were hard to break out."

Voke analyst Theresa Lanowitz said it's difficult to know exactly what went down with potential buyers. "There may have been source code issues, revenue issues, intellectual property issues," she said. "But the whole reporting of events would have been a lot cleaner if they had not announced [the plan to sell] in February, and then dragged out [the process] until November."

Lanowitz, who worked for Borland earlier in her career, isn't convinced the decision to spin off the IDE business will work. "The IDE business today is commoditized," she said. "It comes down to Eclipse and Microsoft Visual Studio," she said. "It doesn't make sense to operate a wholly owned subsidiary in a commoditized market."

IDE DOWN, ALM UP

According to Borland's own numbers, the market for its IDEs is declining. For the third quarter ending Sept. 30, 2006, revenues for the IDE business reached US$15 million, compared with $24.4 million for the first quarter of 2006. The company reported an overall net loss of $12.2 million for the third quarter of 2006, but one bright spot was the growth of Borland's application life-cycle management business. ALM revenue for the third quarter of 2006 reached $54.7 million, up 91 percent over the third quarter of 2005.

"That is something Borland can be proud of," said Ovum analyst Bola Rotibi. The figures are certainly impressive, she said. "But they don't reflect the growth of Borland's ALM platform." They represent sales of point products that fall under the ALM umbrella, such as Caliber (for requirements) Together (for modeling), Tempo (IT governance), Silk and Gauntlet (for testing), she said, noting that Borland's ALM competitors measure revenue the same way.

Rotibi said she was shocked how far revenues for Borland's IDEs had dropped, but she believes there is an opportunity for CodeGear. "People are writing code; they are creating composite applications," she said. "Eclipse has gained popularity. But the need for good tools is still there."

Borland acknowledged that it doesn't see growth for older IDEs, such as Delphi. But Ben Smith, who worked with the developer tools group for 12 months before assuming his new role as CodeGear CEO in November, sees new revenue opportunities in JBuilder 2007. "I don't see JBuilder collapsing under Eclipse. I see opportunities to build a business on JBuilder Eclipse," he said of the company's Java IDE. JBuilder 2007 now is built on Eclipse, instead of Borland's older, PrimeTime framework. And it provides features that make it easier for developers to manage open-source tools, such as Subversion and Bugzilla, within JBuilder, he said.

Smith noted that CodeGear will have a separate brand, management team, research and development organization, sales and marketing strategy and global operating infrastructure. He also said the Borland subsidiary will begin reporting sales and earnings numbers early next year.

CodeGear must move quickly to prove it has a business worth saving, and Borland needs to prove it is a viable ALM player, said Rotibi. "Going forward, we are going to want to see a return to profit in 2007. There can be no excuses." ■

BORLAND'S BIG ABOUT-FACE

■ **July 2005:** Anticipating disappointing second-quarter results, Borland's Dale Fuller steps down after six years as CEO. COO Scott Arnold is named acting CEO. Self-described "significant shareholder" and former board member Robert Coates articulates a plan for Borland, saying the company should spin off the legacy developer tools and focus on its application life-cycle offerings.

■ **August 2005:** Borland chief marketing officer Rick Jackson tells SD Times that acting CEO Arnold is the "leading candidate" for the top spot vacated by Fuller. Jackson also admits that Borland had created the false impression that it was abandoning its developer tools, such as its Java IDE JBuilder, in favor of its life-cycle offerings known as Core SDP. He articulates the company's new message that the developer role is the central role in the overall application life cycle.

■ **September 2005:** Coates announces that Borland's board of directors rejected "without discussion" his US$150 million offer to buy the company's Delphi and Deploy products. A letter Borland's counsel sent to Coates' counsel states: "Delphi and Deploy are integral to Borland's business and growth strategy, and are not for sale." That same month Borland releases JBuilder 2006.

■ **October 2005:** Borland updates its Delphi, C++ Builder and C# Builder and announces that it has combined the three IDEs into a single offering known as Borland Developer Studio.

■ **November 2005:** Borland names former BEA executive Tod Nielsen president and CEO. Does not explain why "leading candidate" Arnold didn't get the job.

■ **February 2006:** Borland announces plan to sell its IDE business, including JBuilder, along with its tools for C++, C# and Delphi developers. Also announces plan to buy testing tool maker Segue Software for about $100 million, focusing Borland's efforts on application life-cycle management offerings. Reports $9.6 million net loss for the fourth quarter of 2005.

■ **May 2006:** Borland reorganizes, separating the developer tools group, which sells IDEs, from the rest of the company, which provides application life-cycle management software and services. Cuts workforce by 20 percent; reports first-quarter 2006 net loss of $8.9 million; says the company will name a buyer by end of third quarter of 2006.

■ **August 2006:** Borland revives Turbo brand, bringing back developer tools for Delphi, C++ and C#. Reiterates promise to name a buyer for developer tools group by end of third quarter. Reports net loss of $19 million for second quarter of 2006.

■ **September 2006:** Borland misses self-imposed deadline to name buyer before end of third quarter, declining opportunity to explain why. Announces plan to replace Core SDP product line with the Lifecycle Quality Management Suite.

■ **November 2006:** Borland acknowledges that it has not found the right buyer for its IDE business. Announces that the developer tools group will operate under the name CodeGear as a new subsidiary. Reports net loss of $12.2 million for third quarter of 2006. Breaks out revenues for its application life-cycle management business, showing an increase of 91 percent, compared with revenues for third quarter of 2005. Releases JBuilder 2007, based on Eclipse instead of Borland's PrimeTime framework.

—Jennifer deJong

Hitachi Revs XBRL Lineup, Anticipates Uptake

BY P.J. CONNOLLY

The Extensible Business Reporting Language (XBRL), a global standard for the communication of business and financial information, got a shot in the arm over the past month from Hitachi America.

The company's XBRL business unit announced three developments aimed at making the XML-based language more of a financial analysis tool than its current role as a reporting format might suggest.

First, Hitachi America announced the general availability of Xinba 2.0, an add-in for Microsoft Excel that gives users the ability to manipulate XBRL financial information inside the familiar spreadsheet application. Xinba uses Web services to access financial taxonomies and XBRL instances, allowing users to import financial information in both XBRL 2.0a and 2.1 formats.

Xinba includes predefined templates, or users can develop their own for importing XBRL data without cutting and pasting. A new plug-in framework lets users extend Xinba with additional modules or develop their own, using the open Xinba API. Plug-ins become active as soon as they are placed in the appropriate directory. The API also allows users to take advantage of Excel VBA to create complex models based on XBRL data.

Meanwhile, Hitachi America was expected to announce the availability of a free Xinba reader on Nov. 20, for users who don't need the analysis features of the full Xinba release.

These two releases follow on the heels of Hitachi America's refinement of its product family last month. In addition to Xinba, the company now offers XBRL Controller, a server-based product for internal reporting, global ledger and Sarbanes-Oxley compliance, with a journalizing engine at its heart; its counterpart XBRL Reporter, for external financial reporting; and a suite that combines the two. Other services available from Hitachi America include XBRL taxonomy design consulting as well as the usual system integration and training services.

Business unit director Wilson So explained that the company began its XBRL effort by importing technology, but the need for simpler-to-use tools was the origin of Xinba. It was "something that we felt a need for when we started this business unit, and we actually developed the product entirely in the U.S., for the U.S. market. It's now being introduced back in Japan and other parts of the world as well."

So sees XBRL as moving down the food chain, eventually becoming the lingua franca for everyday banking transactions, such as loan approvals, perhaps becoming the next standard for personal financial data. But he noted that a U.S. Securities and Exchange Commission project designed to expose XBRL data to the public is due in about six months. ■

Motorola Adopts Apache Licensing for Java ME

Seeks unified mobile Java stack; Sun remains committed to CDDL

BY P.J. CONNOLLY

Unlike its larger brothers, Java Micro Edition is a fragmented platform in many ways, with every hardware manufacturer forking the code to one degree or another, trying to get it to work within their device constraints. In an attempt to address the problem, mobile Java pioneer Motorola announced at the end of October that its future Java ME developments would follow Apache License version 2.0, and invited the broader industry to join the company in creating a complete and unified Java ME stack under the license.

Of course, the other player in the Java ME space has its own plans for open-source licensing of the environment. Sun Microsystems CEO Jonathan Schwartz noted the week before the Motorola announcement that CDDL, the Community Distribution and Development License, was likely to be his company's choice for an open-source Java ME license. Sun earlier in the year announced its intent to release its Java ME as open-source software by year's end and has already put its weight behind CDDL for other projects.

Although having each of the Java ME heavyweights lined up behind different open-source licenses may present a problem on the surface, it is unclear if any direct licensing conflicts exist between the Apache and CDDL schemes.

JAVA ME'S 'DIRTY SECRET'

What may be more dangerous than theoretical licensing questions is the possibility of two incompatible open-source Java ME platforms emerging. Motorola and Sun are not working closely together in their open-source Java projects, according to Motorola's senior director and chief platform architect for its mobile devices business, Mark VandenBrink. "The dirty secret of Java ME is that the reference implementations are not product quality, from any company," he noted. "We're trying to move to a common implementation as a starting point," with device makers optimizing Java ME for their hardware.

VandenBrink compared his company's open-source Java ME effort to the Apache Harmony project, which began in 2005 to create an open-source version of Java Standard Edition and is dominated by developers from IBM and Intel. Sun has since announced plans to follow up Project Glassfish—the open implementation of Java Enterprise Edition—by open-sourcing Java SE 6.

The obstacle, VandenBrink noted, is that Java ME exists more as an idea than a package. "What you end up with [is] a collection of about 15, 16, maybe as high as 20 JSRs all owned by different companies. It's really an assemblage of all these parts that need to be put together in order to be a competitive platform." ▮

Device Development Enhanced for Eclipse

'Milestone' DSDP releases target rich client, devices and dev tools

BY P.J. CONNOLLY

Software development for embedded devices took a step forward in mid-November, when the Eclipse Foundation announced the availability of three "milestone" releases within the Eclipse Device Software Development Platform, or DSDP. The effort, started by Wind River Systems and adopted by the foundation in June 2005 as a so-called "top-level" project, now constitutes more than 550,000 lines of code maintained by 40 committers from 10 companies.

The aim of DSDP is to build an extensible, open, scalable and standards-based development platform for the device software market, one built on Eclipse. The three releases cover the fundamental areas of client support, device management and developer tools, and are available at www.eclipse.org/dsdp.

Doug Gaff, DSDP project management committee leader and engineering manager at Wind River, stressed that the overall project had broad support and is "living up to the need for diversity" in an Eclipse top-level project; IBM, MontaVista, Motorola, Nokia, PalmSource, Sony Ericsson, Symbian and TradeScape are all actively participating. "We've picked the three that are…the furthest along in terms of release-quality development and…community diversity," Gaff said.

One of the releases, Embedded Rich Client Platform 1.0, is an extension of the Eclipse RCP to embedded devices, allowing developers to mobilize their applications while using the familiar Eclipse paradigms of views and workbenches. This first release, for Windows Mobile 2003/2005 and Nokia Series 80 and S60 devices, accommodates the constraints of handsets and PDAs by reducing the RCP footprint where possible, while enabling application binary compatibility.

Device management for embedded systems is always a complicated matter. The second DSDP release, Target Management 1.0, is designed to create data models and frameworks that are useful, yet open enough to accommodate vendor-specific extensions. Target Management is based on an open-source version of IBM's Remote System Explorer. This release includes sample implementations for TCP/IP connections, FTP data transfer through the Jakarta Commons Net library, and remote launching of the GNU Project Debugger in the C/C++ Development Tooling environment.

Finally, Mobile Tools for the Java Platform 0.7 offers a deployment framework, a device and emulator framework, and other tools that extend the Eclipse platform. Although mobile Java allows many combinations of configuration and profiling methods, this first release will focus on the combination of the CLDC (Connected, Limited Device Configuration) and MIDP (Mobile Information Device Profile) JSRs. ▮

IN THE DSDP PIPELINE

ACCEPTED

Device Debugging (DD):
The DD project builds APIs, enhanced debug models and views that expand the reach of the Eclipse Debug Platform to accommodate the added complexities of developing for embedded systems with multiple processor types and limited memory. A Debugger Services Framework will allow Eclipse to accept debugger back ends in a modular fashion.

Native Application Builder (NAB):
Based on the WideStudio/Multiplatform Widget Toolkit project, NAB is a general tool and runtime library for building GUI applications on multiple platforms, including Linux, Mac OS X and Windows, along with several embedded RTOSes.

PROPOSED

Tools for Mobile Linux (TmL):
As more mobile device manufacturers adopt Linux, the need arises for extensible frameworks and exemplary tools for developing C++ applications for these devices. The proposed project's goal is to provide a development environment meeting this need; a secondary goal is to provide an environment for the entire device software stack, from operating system through applications.

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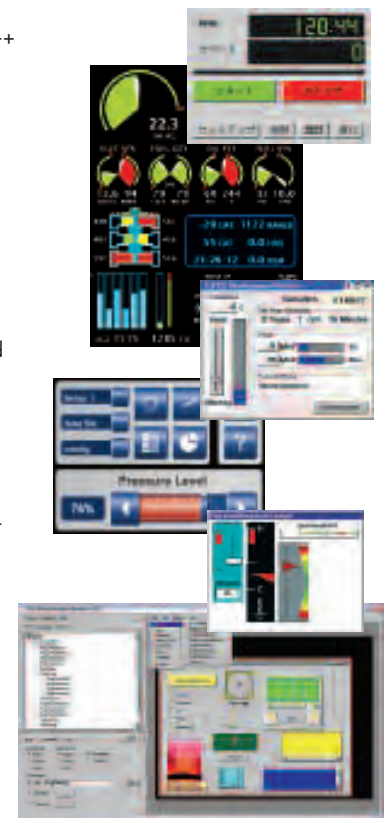
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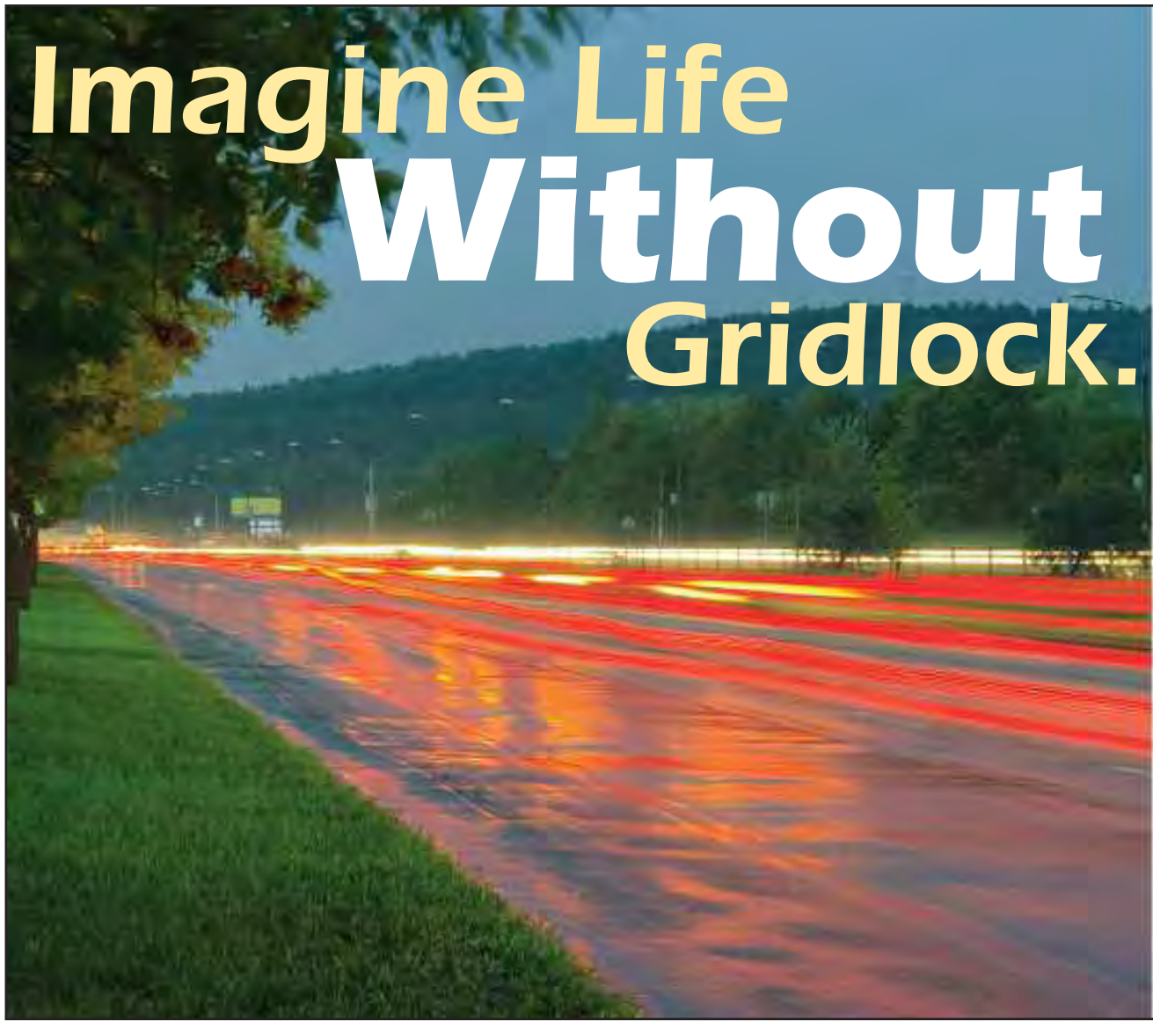

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Speaking in Tongues

Embedded runtime engines enable databases to master modern languages

BY JENNIFER DEJONG

Now fluent in modern languages, enterprise databases are opening new doors for application developers.

By embedding a runtime engine in their offerings, database makers have enabled developers to use Java or C# within the database itself, instead of writing code in older, specialized languages such as Oracle's Procedural Language SQL (PL/SQL), or Transact SQL (T-SQL), used by Microsoft and Sybase.

There are three reasons why database support for modern languages matters.

First, it lets developers implement more, and increasingly complex, application logic in the database, said Burton Group research director Peter O'Kelly. Second, it allows development teams to take advantage of a consistent programming model across all application tiers,

continued on page 38 ►

Databases Master Modern Languages

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he said. Third, modern language support lays the foundation for databases to take on a crucial role in service-oriented architectures. "As the database expands to accommodate services, it is becoming the center of things," said O'Kelly.

'STRAIN ON THE BRAIN'

Using the same language across all tiers eases the job of coding, said Tom Traubitz, director of database products for Sybase. "In the past, you had to learn C language [for example]. Then a custom language for Oracle [and] a custom language for Sybase," he said. "It was a strain on the brain."

Now a Visual Basic developer, for example, can use that same language in SQL Server 2005, instead of having to also master T-SQL, said Christian Kleinerman, SQL Server program manager for Microsoft. "There is more choice."

More important, increasingly complex tasks can be accomplished at the database level. "You can manipulate strings, or work with collections," said Lance Olson, SQL Server lead program manager for Microsoft, referring to specialized classes in the .NET Framework for data storage and retrieval. By using C#, for example, in SQL Server 2005 developers can extend the language to define new classes and methods. "You could create a method that computes the distance between two ZIP code types," said Kleinerman. "You could not do that in T-SQL."

Using Java within Adaptive Server, Sybase's relational database offering, allows developers to bring to database programming "the richness of Java, and the broader concept of classes, which did not exist in T-SQL," added Traubitz. The specialized database languages were designed for more rudimentary tasks, noted O'Kelly. They are good at reading data from a database, and adding a couple of joins, he said, offering an example.

OPENING OTHER DOORS

Java support for relational databases originated in the late 1990s, when Oracle and Sybase added Java Virtual Machines to their respective offerings to make it easier to write stored procedures.

A stored procedure is a program that runs within the database that can take complex actions based on the input it receives. Using stored procedures lets developers carry out

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Java-enabled databases allow a Web service to be hosted on a database server, says Forrester's Fulton.

After the Web Era, a Database Renaissance

BY JENNIFER DEJONG

Conventional wisdom holds that development of database management systems has been driven steadily forward since they first emerged in the 1960s. But one research analyst stands by his view that the database marketplace actually went into reverse in the mid- to late 1990s, when the World Wide Web arrived on the scene.

"The rush to the Web relegated the DBMS to a reduced role," said Peter O'Kelly, research director for Burton Group. During that period, developers focused on integrating disparate systems that drove their Web applications, he said. And, with the rise of application servers, most of the logic went into the Web tier. "People didn't use stored procedures; they didn't use triggers," he said, referring to the procedural code that is executed in response to certain events on a particular table in a database.

Databases are only just now beginning to move forward again, said O'Kelly. "We are seeing a renaissance for DBMS." As more and more application logic is implemented in databases, they are becoming general-purpose message brokers in service-oriented architectures, he said.

One factor giving rise to that renaissance, said Microsoft SQL Server program manager Christian Kleinerman, is the huge data explosion caused by the Web itself. Since businesses established an online presence, there is more data created and gathered than ever before. "More attention is paid to that data," he said. "Now that the Web era has been largely implemented, the database will play an even bigger role." ▮

With so many businesses online, there has been a huge explosion of data, says Microsoft's Kleinerman.

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Databases Master Modern Languages

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in a single step tasks that would otherwise require several, separate calls to the database, explained Forrester Research analyst Larry Fulton. "With one call to the database, you could eliminate latency and [gain] faster throughput."

While stored procedures can be coded in PL/SQL or T-SQL, writing them in Java or other modern languages is easier. Stored procedures are essentially encapsulated actions, said Sybase's Traubitz. "And Java is good at writing encapsulated stuff."

The ability to implement stored procedures in Java is useful, but it is only an evolutionary step forward, said Fulton. More interesting is the other doors Java-enabled databases have opened. "They allow you to host a Web service on a database server," he said. "With no intermediate layer to look up services, that eliminates a few extra components."

A key benefit of hosting a Web service on the database is reuse, noted Burton Group's O'Kelly. "You are getting things out of specific applications and pulling them into a management system where application logic can be uniformly applied." That's especially useful for services that contain dynamic data, such as those that determine a customer's credit rating, or calculate shipping fees by computing the distance between two ZIP codes, he said. "There is a benefit to doing that in the database." Incorporating the .NET Framework in SQL Server 2005 offers a "quicker avenue to creating Web services and exposing them in a service-oriented architecture," added Microsoft's Olson.

Building modern language capabilities into databases has enabled developers to add increasingly detailed logic to data structures, said Sybase's Traubitz. "You can say more complicated things about security authorization," he said, offering an example. "By encapsulating the logic of who is authorized to access which resources at the database level, there is no need to replicate that logic in each separate system, such as handheld devices," he said.

'CAN'T FLIP A SWITCH'

Advantages aside, most developers have not yet begun to tap the potential of using Java or .NET languages with the database, noted O'Kelly. "There is a huge installed based of T-SQL and PL/SQL developers out there. And you can't just flip a switch and move from one to the other. It will take several years," he said.

And there are also cases where the older, specialized database languages continue to make sense. "When there is not much computational logic involved, when you are simply reading data from the database, T-SQL [is the better choice]," said Microsoft's Kleinerman. But when the center of gravity revolves around application logic, such as a complex logistics system, with a huge number of components and object classes, you are better off moving to managed code, O'Kelly said. ▮

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FROM THE EDITORS

Open-Source Java: It's About Time

The concept of an open-source Java isn't new. SD Times reported, back in 2000, about Sun's flirting with Ecma, the European Computer Manufacturers Association, about their blessing Java the way Ecma had blessed JavaScript (later renamed ECMAScript). But ultimately, Sun backed away from the standardization process—and of course, Microsoft capitalized on this by turning its own language, C#, over to Ecma.

In the six years since, Sun has gone back and forth on the issue. As Linux gained popularity, the cries for an open-source Java, to present a united front against Windows and .NET, became louder, particularly from IBM. Sun demurred. But then, under Jonathan Schwartz, Sun got religion. It pushed its NetBeans open-source tools framework harder than ever. Next, Solaris, always Sun's secret weapon, was also released as OpenSolaris. With Java, as Schwartz said at JavaOne, it was only a matter of time.

The time has come. Sun has announced that it would release Java SE and Java ME as open-source using the GNU General Public License v2. Yes, there has been some controversy, most vocally about the use of the GPL. Some talking heads would have preferred that Sun adopt the Apache License, used for Apache's competing Harmony open-source Java project. Others cited the simplicity of the Common Development and Distribution License (CDDL), used for OpenSolaris. But those are, at first blush, tempests in a teapot.

The important point to remember is that releasing a popular, well-supported application as open-source software can drive adoption. There's no question that Java is popular and well supported. Unleashing Java SE and Java ME is only good for Java, and for all the enterprise developers and software companies that use Java.

However, what's good for Java isn't necessarily bad for competing languages and platforms. Microsoft shops, for example, are unlikely to decrease the use of C#, .NET and the entire Windows software stack because Java has been released as open-source software.

Where the big payoff will be is likely in embedded software and mobile devices. Device and software makers will now be free to use Java ME without royalties, and can modify and slim down the JDK to suit their needs. It's not a matter of forking; it's a matter of hardware efficiency. That's where the first fruits of Schwartz's decision are likely to be harvested.

The Virtual Microsoft

Only Microsoft could promise not to sue a competitor, and as a result create panic over potential lawsuits.

When Microsoft announced that it would give Novell a free pass to infringe its software patents in the name of interoperability, Linux pundits began to fret that the move could contaminate other distributions. But the alliance between Novell and Microsoft isn't just about putting the rest of the Linux world on notice.

Simon Phipps, an open-source luminary at Sun, is convinced that the Novell/Microsoft deal was born out of Novell's own patent portfolio: He surmises that Novell had Microsoft over the proverbial barrel with a NetWare-era software patent. Why else would Microsoft commit hundreds of millions of dollars to boost SUSE Linux?

That rumor aside, the real story here is that Microsoft apparently has realized its server market is in jeopardy. Now, the company has performed a textbook wheel, turning its troops mid-battle to protect the flanks. But it's not the enemy that has changed; it's the battlefield itself. Where once the question for servers was "Windows or Unix?" virtualization changes the answers in a recursive and mind-bending way.

When you get right down to it, Microsoft's designation of a partner here will benefit both companies: Virtualized or not, both operating systems will still require you to buy a license to run them. ■

Kill Your Inventory Manager

We've all seen the "Kill Your Television" bumper stickers that encourage us to fix all of our family dysfunction by moving away from that giant time-suck called prime time. If I could create a similar bumper sticker to address the professional lives of software teams, it would be: "Kill Your Inventory Manager." The implication is that you can fix your team's dysfunction by moving away from the giant time-suck and paralyzing friction of inventory management in software development.

As a profession, we have gotten extremely good at managing inventory. It has taken us years—but, boy, we build some giant tools and systems to manage it. We have come to believe that planning is a weekly act of re-prioritizing the inventory list and progress is measured by the number of items that are completed. With modern bug-trackers and requirements management systems, we can even transfer the burden of inventory tracking to our customers by exposing the bug/issue list front-and-center on our Web site or open-source project page. In the worst cases, life deteriorates to a level where the team essentially works for the inventory manager and where customers believe they are there to test. Is this the best way to build highly usable, valuable software?

If you are thinking to yourself right now that software is similar to a manufacturing setting in which inventory is a necessary evil—wake up. For the past 20 years, the best manufacturers (think Toyota and Dell) have worked to reduce all forms of inventory, realizing it makes them fat, slow and uncompetitive.

Inventory management systems were originally built to support a waterfall, or assembly-line, approach to software development. Metaphorically, these systems are akin to horizontal shelves that accumulate inventory in the factory and warehouse. What is the problem with in-progress work stacked neatly on shelves and ready to be completed? Hidden in those piles of work and systems are very bad defects tied to technical debt, important requirements and lots of partially completed items that are development complete, but not "done" enough to release or test. Managing, prioritizing and re-prioritiz-

LETTERS TO THE EDITOR

Get Requirements Right

Kudos to David Rubinstein for catching on that "requirements management" is not the most critical part of requirements ["A Big Disconnect," Nov. 1, page 42]. Indeed, getting the requirements right is the most critical part. Clerical administrative "management" activities such as storing, manipulating and tracking are important once requirements have been defined correctly, but they aren't the activities needed to get the requirements right.

Moreover, it's important to get the *real*, business requirements right—in detail—before worrying about the product/system/software/functional requirements/specifications that most people incorrectly presume to be *the* requirements. And, yes, it's also essential to validate that the defined requirements in fact are right; but most people use only one or two weaker-than-realized methods that primarily emphasize clarity/testability, but are unlikely to catch incorrect and overlooked requirements.

Robin F. Goldsmith

BORLAND'S BEST

Regarding Larry O'Brien's column, "Borland's Tool Might Have a Future" [April 15, page 27], Borland "C" and Builder products are the "dog's b**locks," long may they reign.

Best regards from a real for-money programmer with a conscience, not a Micro$oft visual whatever lackey.

Richard Scammell

Editor's note: In that column, O'Brien wrote of Borland's developer tools group: "While a straight acquisition is far more likely, it is also less likely to institute the broad changes that would be necessary for DevCo to regain its prominence. So here's hoping for a phoenix rising from Scotts Valley."

Part one of wish granted. Whether or not the company can turn the newly named CodeGear developer tools subsidiary into a phoenix remains to be seen.

WHAT DO YOU THINK?

SD Times welcomes feedback. Letters should include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited for space and style. Send your thoughts to feedback@bzmedia.com.

ing these piles are a waste of the team's time that increasingly slows the delivery of real, working product.

In addition, the accumulation of work on these horizontal shelves encourages teams to make releases into large bites of major architectural changes that will "fix everything." Working on large release batches with the help of an inventory manager tends to encourage teams to just work "for" the inventory manager with an elaborate workflow. This behavior builds walls between teams and decreases communication by forcing communication through documents, thus creating waste due to the energy lost to friction.

The authors of the Agile Manifesto (www.agilemanifesto.org) knew this. The first item of the manifesto stresses, "Individuals and Interactions Over Process and Tools." The extreme response to this statement would be to throw out your team's current inventory and workflow management systems!

Bear with me and this experiment for a moment. Starting tomorrow, cut off access of your mainline or new development team (not your maintenance team or customer support group) to the following systems:

- Requirements management system in the form of system or document.
- Defect management system for flowing work through the team.

Now that there is no "inventory," start collaborating with your team to develop a rapid, steady flow of working software. Following agile methods, try putting just three to five of your highest-priority items into a short, two-week iteration. Operate in cross-functional teams of no more than 10 people, and track your priorities on sticky notes on physical or virtual whiteboard. (With your team focusing only on three to five items, it's easy to do without your inventory management.)

As a result of working without an inventory manager, your team will focus on choosing the right backlog items, keeping debt low, testing early, automating tests and making and meeting commitments. They will do this through constant team communication, daily stand-ups and pairing, effective planning every two weeks, and measuring their progress through working, tested software that delights users. Where in this world do you need an inventory manager?

Is it that easy? The short answer is yes and no. To move to agile iterations, you must prepare in two parts:

1. You must pay down defect or technical debt that requires your team to use an inventory manager in the first place. (These are things that are starting to "smell bad," and your team knows exactly what they are. Examples include critical defects, technical hacks that need to be refactored, automated build updates and refactoring tools.)

2. You must establish a clear priority to your work that allows you and your stakeholders to feel good about the next three to five items you will be working on.

For teams getting started with agile, this preparation typically takes from one to four weeks of the team's time. It is generally easier and faster to get preparation done before starting your first iteration, but it's sometimes very hard to clear that much space in the development calendar. In some teams, preparation is done prior to starting a true agile iteration and in other teams, it is factored into their first set of iterations.

Moving to agile is simple but, at the same time, it changes everything. Just like throwing out your inventory managers, agile adoption can be hard, but I know you can do it. Once you start the move with a few teams, the positive feedback of speeding the delivery of value will not let you go back to waterfall, ad hoc or iterative development of inventory.

There are tons of resources, coaching firms, and tools out there to help you move and scale agile. Go ahead, "Kill Your Inventory Manager!" and get started. ▮

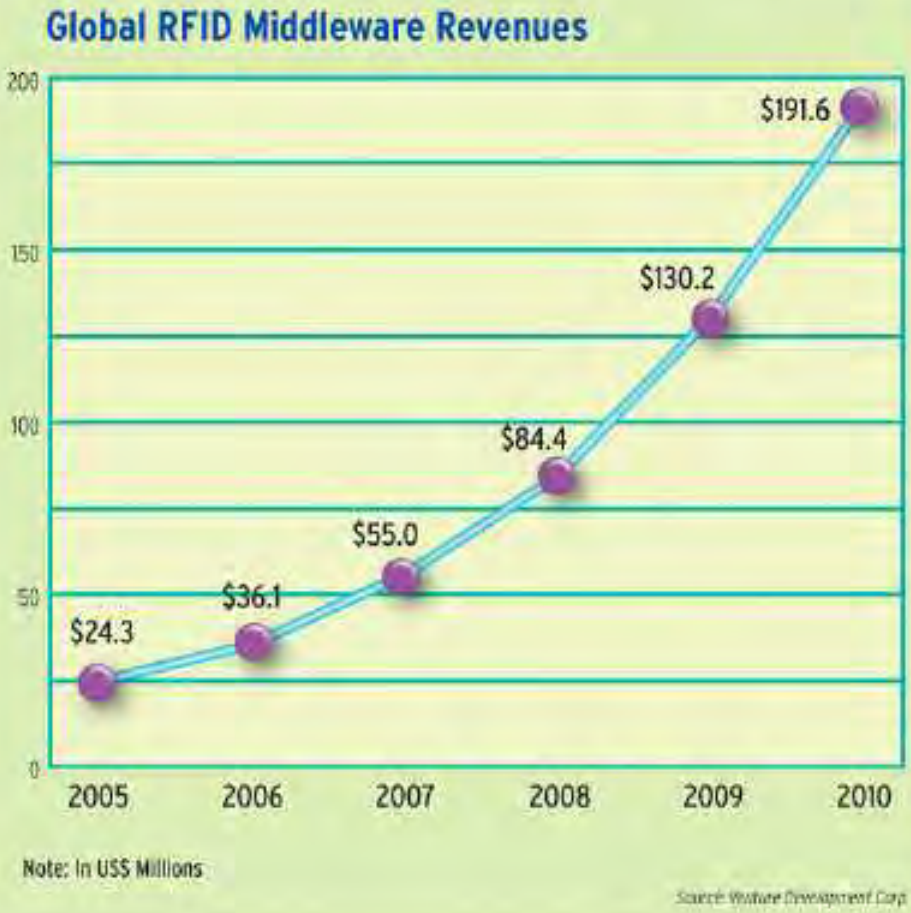
Ryan Martens is founder and CTO of Rally Software Development, which provides tools and services for agile development.

RFID Market to Feel Squeeze

DATA WATCH

Global revenues for the RFID middleware market are expected to grow by roughly half every year for the next five years, according to the recently released report "RFID Middleware Market Draws Competition," from market researchers at Venture Development Corp. Revenues are anticipated to exceed US$190 million in five years. The survey was focused on the supply side, with end users, channel people and suppliers responding.

The most interesting development, according to director Andrew Nathanson, will be the pressure on pure-play middleware vendors, who can expect to be squeezed between hardware manufacturers adding functionality to the tags, and enterprise software players pushing their application and data platforms closer to the so-called edge.



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The 'Oy' of Blogging

Sturgeon's Law in its common formulation states that "90% of everything is crud." This observation especially applies to the blogosphere. And here I am not referring to content alone (where the 90 percent figure seems rather conservative), but also to the underlying technology. But I'll start with content.

You can quickly come to 90 percent of content if you add up the self-absorbed blogs of tweens, teens and college kids; the hate blogs; and, of course, the many, many abandoned blogs. Of the remaining 10 percent, you then eliminate topics that don't interest you. You now are way under 1 percent—yet you have literally hundreds of blogs to choose from. If software development is your thing, you'll want to skim off the blogs by engineers or CEOs who are shills for their companies; those who evangelize their pet technology; and most especially, those who are always attacking or condemning some person, some company or some technology. Finally, you're in the clear, with the handful of truly useful blogs.

You then must accept that most of these blogs are only intermittently maintained. Many have frequent entries apologizing for not having posted in weeks. Eliminate these, if you will, and you have the true short list of active, intelligent blogs on your favorite topic. Try as I might, I can't expand my list to more than 15 blogs whose new posts I read right away. Of these, exactly two make all the searching worthwhile: Jon Udell's "Jon's Radio" and Larry O'Brien's "Knowing .NET." What distinguishes them is the frequency of posts, their consistent quality and especially a personal intimacy. These bloggers share their pain, their quest for solutions and the answers they find. Time spent with them is never unrewarded. All of which makes me very skeptical when I go to blogs that sport dozens, even hundreds, of links in the blogroll panel. To admire so many blogs suggests a lack of discrimination.

Integration Watch

Now, to presentation. It's hard to think of a medium less designed for real communication than a blog. Nearly every one of the blog systems today use software from one of four or five companies that provide a basic design with a selection of slightly varied templates. However, they all use the same static paradigm: a main panel of text with one or more additional columns of predictable material—generally a bio, a blog roll and a calendar linking to the very same blog you're looking at. Gosh. How about active content? Maybe a dash of Web 2.0? How about sidebar links to other things? Or links that tell you where they lead when you hover, so you don't keep clicking on definitions of terms in Wikipedia or other silly nonsense? How about using Google's translation engine to provide translations automatically at post time? Or showing me links in the current blog that refer back to the present entry? Or showing me the number of people who have visited this particular post? Even getting posted comments straight would be helpful: Why not thread them as newsgroups do instead of having one comment refer to a previous comment that must be guessed. Come on, guys, none of this is hard, yet (to my knowledge) most blogging software offers few, if any, of these features.

Related technology has its own challenges. The one technically advanced portion of the blogosphere is the ability to federate blog feeds easily. RSS and Atom have made this simple, and they are good tools for developers to explore. (By the by, a remarkably good book on programming these technologies is "RSS and Atom in Action" by Dave Johnson.)

However, using these technologies and the tagging mechanisms in Digg, del.icio.us and Technorati requires that bloggers dip into a whole other world unrelated to their core competence and to master its ins and outs. Little of this world is laid out in simple terms, and most of the technology providers assume that bloggers already know how to use them. (For example, go to digg.com and try to find out how to place a Digg button on your blog entries.) Once you've got all that set up and working, you can then spend your time fighting off comment spam.

So, putting aside the content issues, it's safe to say that blogs are predictable in their presentation, limited in their capabilities, difficult to set up right and a pain to maintain actively. It's no wonder that so many blogs are eventually abandoned. For a technology that supposedly will democratize the world, it has a long way to go. May progress come soon. ▮

Andrew Binstock is the principal analyst at Pacific Data Works. Read his blog at binstock.blogspot.com.

Earthquakes, Flexibility and Luck

A few weeks ago I woke to a magnitude 6.7 earthquake centered 17 miles from my house. As the shaking increased from "truck passing by" to "ascending through turbulence," I rolled out of bed, grabbed the dog and moved into a doorway. Yes, this left my wife to fend for herself, but in an emergency one must have priorities.

A few moments later, the earthquake ramped up into an experience quite unlike anything I have been through in two decades of living in California. The sliding glass door in which I braced myself (my wife, with her own priorities, having claimed the sturdy wood-framed one) flexed visibly. The increased amplitude of the shaking was not shocking; the much higher frequency and consequently shorter wavelengths, though, were astonishing. My dog was moving in one direction, I another, and the top and bottom of the door were out of sync. These short-wavelength components were, fortunately, of much lower amplitude than the big bumps that were rolling through. After perhaps 20 seconds, the shaking reached a crescendo, then things steadied (for eight minutes, after which we had a 6.0 magnitude aftershock, which caught me kneeling amid the shards of a shattered mirror).

No one was killed in the earthquake, and although damage estimates continue to rise, to me the real story is how well our infrastructure survived a dramatic blow. Power and water were restored by the evening, schools were out for two or three days at the most, and while two of our retaining walls were damaged and we had extensive breakage inside, our house was structurally unharmed. I can't help but think that few software systems would prove so resilient.

Windows & .NET Watch

Experts say that first-world nations have two great benefits during an earthquake: construction codes and wood framing. While all owners fume and fuss about the inconvenience of permits and inspections, the codes ensure the wires, foundations and support beams of our environment support a minimum level of safety.

Imagine the added cost of due diligence if buildings were constructed as arbitrarily as software systems. Outside of certain, primarily governmental, niches (aviation, defense, power generation, medical embedded systems and the like), software safety standards are virtually invisible. My brother, a mechanical engineer, is continually surprised by the lack of rigor I describe, even when I'm talking about systems on which enterprises rely.

The miraculous qualities of wood include the flexibility that so transfixed me during the earthquake and that, seemingly paradoxically, protected the integrity of our house, while concrete and stone retaining walls separated and collapsed. This, to me, is where there simply is no analog in the world of software. True, the managed environments have disciplined exception propagation and containment: A failure in your C# or VB.NET or Java code is not likely to require a press of The Big Red Switch and, even better, generally produce stack traces that provide a fighting chance at diagnosing the underlying problem. But when we praise software systems for "flexibility," we mean something vastly less than when we apply that word to a material.

To an unexpected input, the most we can hope of our software systems is noncorrupting failure. While interfaces (in the object-oriented sense) provide some protection against implementation dependencies, "programming to an interface" is an uncommon virtue, especially in the past few years, with the rise of "you ain't gonna need it" as a touchstone for design. Web services, with their indirection behind the Domain Name System and load balancers, are one of the other few bright spots.

A few academics, such as Jiming Liu and K.C. Tsui writing in the October Communications of the ACM, have proposed biologically inspired models for creating truly flexible software systems (Jaron Lanier, who greatly hyped virtual reality, threw a similar nature-inspired concept against the wall a few years back, decided it didn't stick and is now decrying Wikipedia). In general, though, if your software expects a positive integer, you'd darn well better provide it one. Whether it's written in a language that assigns it a type explicitly, by inference or by runtime duck typing is irrelevant.

On the other hand, I've never read an adequate explanation of "what went right" on New Year's 2000. There really were billions of lines of vulnerable code spread among many industries, including finance and insurance, which seemed especially vulnerable. Instead of chaos or even confusion, there was nothing but a handful of truly trivial issues (betting machines at a race track, ticket validation at a bus station, etc.). Perhaps COBOL has some non-obvious strengths that carried it through the event. Or perhaps, as we inevitably worry after these things happen, we just got lucky. ▮

Larry O'Brien is a technology consultant, analyst and writer. Read his blog at www.knowing.net.

Five Trends in Software Engineering

Globalization. Test automation. Commoditization of technology. Regulatory compliance and tort law. Education and certification.

These are five trends in software engineering identified by consultant Rex Black in his keynote speech at the Software Test & Performance Conference produced in Boston in mid-November by BZ Media, publisher of SD Times.

Industry Watch

The move toward outsourcing development projects was facilitated by software's ability to knock down distance barriers with tools for collaboration and project management, as well as by the demise of artificial political barriers due to the end of the Cold War, Black said. "Now," he noted, "everyone wants to make money."

Black displayed a chart showing the relative median salaries of software engineers in what he called the "old" development countries and the "new." While salaries in the U.S., U.K. and Germany are highest, it was interesting to note that in "new" places such as Ireland and Mexico, developer salaries are almost on a par with such "old" locations as Israel, Japan and New Zealand. India, Russia and Poland still provide big bargains for outsourcing projects on the cheap.

The thrust of Black's remarks regarding automated testing was, "Programmers who don't know testing will deliver poor quality code; testers who can't program can't automate." In other words, unit testing, command-line testing, API-level testing and the like are increasingly becoming the responsibility of programmers—no longer are development and testing separate endeavors.

In his keynote, Black wondered if high tech and IT will become commodities like electricity and transportation. For something to become a commodity, it must have the characteristics of adequate, consistent quality; equal features; and ease of use. Further, Black pointed out, people tend to have no tolerance for bugs in commodities. When they want light in a room, they expect immediate, continuous light. When they commute to work, they expect the train to be on time and to stop at their station every day. Software, in my opinion, is getting close. People are certainly less tolerant of software that fails when they are shopping online, or sending e-mails, or completing a transaction that could mean millions.

Laws also influence how software has to work. Industry and governmental regulations put additional requirements on developers. Privacy, accountability and traceability are becoming more important than ever as the amount of information kept on mainframes and servers and in other data stores grows exponentially.

Finally, Black said, certification is sweeping through the software and systems fields. If your skills fall behind, you become noncompetitive. Developers need to know how to differentiate themselves in terms of their skills, and to grow the ones that are lacking.

OFF THE OPERATING SYSTEM

AJAX, and other technologies that move development off of operating systems and onto the Web, might not have hit the software world like a meteor. Nonetheless, if realized, the vision could make extinct a stalwart of the software market—installers.

They're still quite necessary, as much software continues to be shipped via CD-ROM to be loaded onto a desktop or server. And, they control permissions, feature sets and service-level agreements. But as Web specifications evolve, and more development is done for the Web than for client or server installations, there will be less need to upload drivers, libraries and other operating system specifics.

We are moving toward a time when widgets can persist outside the browser environment. An icon can reside on the desktop, and when double-clicked, bring up an application in its own window. The window looks like any desktop application, but it's actually running on a browser. "The benefit to developers is that they coded for the Web, not for Windows or Linux. There's no install to the end user, and no issues of drivers or APIs," said Håkon Wium Lie, the chief technology officer at browser maker Opera.

"We see an outline of a world where the operating system becomes irrelevant, and you don't have to restart when installing something significant," he continued.

There is a catch, of course. The Web was not created as an application platform. It was created so people in different locations could share documents.

Since then, though, JavaScript and other programming languages have emerged, and standards have been agreed upon for the presentation of materials on the Web. Yet Lie continues to believe the Web is not an ideal environment.

He's part of WHATWG—the Web Hypertext Application Technology Working Group—that wants to evolve existing standards for graphics and audio for use in what is being called Web 2.0.

The members of that group all also work within the World Wide Web Consortium on other Web standards. There remains, though, a philosophical difference between WHATWG and the W3C, which has focused its efforts on XHTML2 and XForms, and other new models designed to replace existing ways to create apps for the Web, Lie said.

It seems minor, but the full vision of Web 2.0 won't be realized until all parties are working toward the same end. ■

David Rubinstein is editor-in-chief of SD Times.

BUSINESS BRIEFS

Sony Ericsson has agreed in principle to acquire Sweden-based software company **UIQ Technology AB**, a wholly owned subsidiary of **Symbian Ltd.** UIQ Technology, which uses Symbian OS, licenses the UIQ user interface and application development platform to mobile phone vendors worldwide. Financial terms of the transaction were not disclosed. Sony Ericsson is already a licensee of UIQ Technology, and has been working closely with the company on UIQ version 3.0, which is included in Sony Ericsson's P990 smartphone, M600 messaging phone and W950 Walkman phone. Following completion of the acquisition, UIQ Technology will operate as a separate business subsidiary of Sony Ericsson under its current management team. UIQ on Symbian OS will continue to be openly available, licensed on equal terms to all its licensees. Sony Ericsson says it expects the transaction to be completed over the next few months, pending regulatory approval and customary closing conditions.

EARNINGS: CA reported second-quarter fiscal 2007 revenue of US$996 million, an increase over the $950 million reported a year earlier, and GAAP net income of $53 million, ahead of the $46 million from the same quarter last year. CA attributed the increase in revenue to growth in subscription and professional services. The company underperformed in the areas of new sales, according to CA CEO John Swainson. This created a whopping 98 percent decline in GAAP cash flow from operations, from $299 million to $6 million in the same period a year earlier . . . SOA platform provider **TenFold**, whose shares trade on the OTC Bulletin Board, reported revenue of US$1.1 million and a net loss of $2.1 million for its fiscal 2006 third quarter ended Sept. 30. TenFold's Q3 ending cash balance was $2.4 million. ■

EVENTS CALENDAR

Application Integration and Web Services Summit — Dec. 4-6
Orlando, Fla.
GARTNER
www.gartner.com/2_events/conferences/apn17.jsp

XML 2006 — Dec. 5-7
Boston
IDEALLIANCE
2006.xmlconference.org

Enterprise Architecture Summit — Dec. 6-8
Orlando, Fla.
GARTNER
www.gartner.com/2_events/conferences/ea5.jsp

Web Design World — Dec. 11-13
Boston
FAWCETTE TECHNICAL PUBLICATIONS
www.ftponline.com/conferences/webdesignworld/2006/boston

Macworld Conference & Expo — Jan. 8-12
San Francisco
IDG WORLD EXPO
www.macworldexpo.com/live/20

RSA Conference — Feb. 5-9
San Francisco
RSA SECURITY
www.rsaconference.com/2007/US

SCALE 5x (Southern California Linux Expo) — Feb. 10-11
Los Angeles
SOCAL LINUX USER GROUPS
www.socallinuxexpo.org/scale5x

SHARE User Events — Feb. 11-16
Tampa, Fla.
SHARE
www.share.org

LinuxWorld OpenSolutions Summit — Feb. 14-15
New York
IDG WORLD EXPO
www.linuxworldexpo.com/live/14

EclipseCon — March 5-8
Santa Clara
ECLIPSE FOUNDATION
www.eclipsecon.org/2007

Game Developers Conference — March 5-9
San Francisco
CMP MEDIA
www.gdconf.com

Developer Relations Conference — March 12-13
San Francisco
EVANS DATA
www.evansdata.com/drc

BrainShare — March 18-23
Salt Lake City
NOVELL
www.novell.com/brainshare

SD West — March 19-23
Santa Clara
CMP MEDIA
www.sdexpo.com

4th Software Security Summit — April 16-17
San Mateo, Calif.
BZ MEDIA
www.S-3con.com

For a more complete calendar of U.S. software development events, see www.bzmedia.com/calendar.

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

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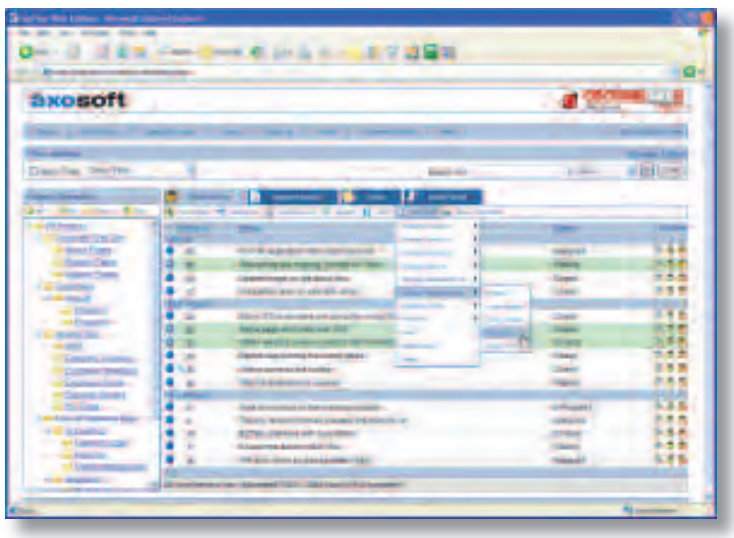

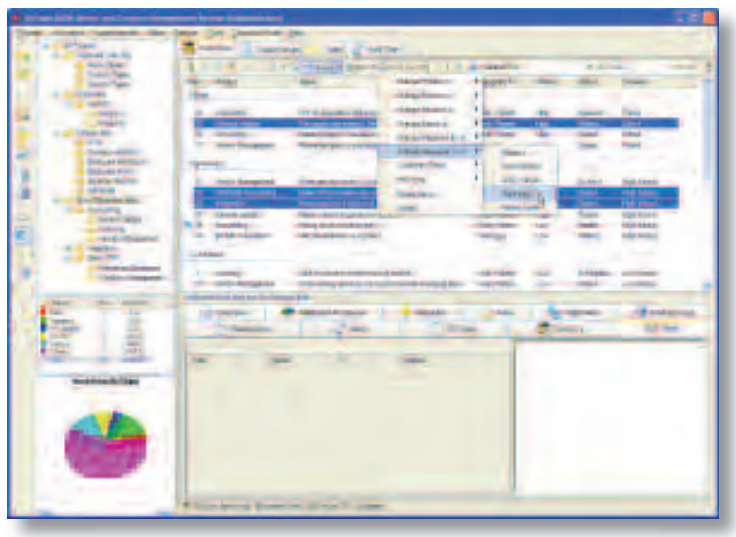

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